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REBUILDING BRITAIN—A TWENTY
YEAR PLAN

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by

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E. D. S.

INTRODUCTION

I AM CONFIDENT that we can in twenty years rebuild Britain, so as to enable every inhabitant, child or adult, to live in a healthy home, in a neighbourhood so planned as to allow easy access for all the members of the family to their places of work and recreation. This is one of the great reforms which is entirely in our own hands; international difficulties (apart from war) cannot interfere with it. We can certainly do it if we make up our minds and stick to it. But it is equally certain that we shall not succeed unless we plan ahead, unless we tackle the different aspects of this wide-ranging programme vigorously and persistently.

We made a good beginning in the inter-war years. Public opinion was determined throughout the period to get rid of the slums. A new and excellent minimum standard of housing was adopted, and four million good houses were built in twenty years—twice the rate of building in Germany per thousand of population. One-third of our families are now living in inter-war houses.

A Government committee has now recommended a new minimum standard of housing which will cost 40% more than the inter-war standard, and the Government has declared that it proposes to house another third of the population in new houses by building four million houses in ten or twelve years—double the inter-war rate of building; if this rate of building is maintained we shall in twenty years have a good house up to inter-war standard for every family.

When we turn to planning, the position is not so good. Our great cities—with a few exceptions, like parts of the West End of London—are ugly, dirty and inconvenient. Neither public opinion, Parliament nor our city councils have felt any real responsibility for the state of our cities. The first Town Planning Act was passed in 1909, but all action so far has been fumbling, negative and ineffective.

Fortunately during the last few years opinion has begun to move. The Government has appointed a special Ministry, and during June and July 1944, while this book was being written, has produced an unparalleled spate of Bills, White Papers, Orders and ministerial statements dealing with different aspects of the rebuilding of Britain. The city councils are now hard at

work ; several of them have published bold and imaginative plans which, if made effective, would lead in due course to beautiful, healthy and convenient cities. But they are only plans. Will they be implemented? Given peace and prosperity, this depends on the determination of the public and on wise and efficient planning and action by the building industry, the local authorities, at least seven Government Departments, and the Government as a whole.

The aim of this book is to try to make clear what are the conditions under which an outstanding success can be achieved : such that a hundred years hence our successors will look back on the fifties and sixties as one of the great building eras in the history of our country.¹

¹ I have omitted almost entirely many important aspects of housing, building and planning, either because I am not competent to discuss them usefully, or because they are not essential to my purpose. For instance, I have not dealt with the problems of the country at all, either as regards housing or planning ; this is partly due to ignorance and partly because it is less important from the point of view of reconstruction than the rebuilding of our cities. I have said nothing about many important aspects of the building industry ; I have hardly mentioned the much-discussed question of flat *versus* cottage, partly because public opinion has pretty well made up its mind in favour of cottages with gardens for all families with children, and partly because I have dealt with it elsewhere. I have dealt only with those aspects of the rent problem which are directly relevant to the rebuilding of our cities.

CONTENTS

Acknowledgments	<i>page</i> 5
Introduction	7

PART I

Building

<i>Chapter I.</i> Building: Inter-War	15
The boom and the slump—The supply of labour —Need for planning.	
II. The Man-Power Plan	20
Government pronouncements—The triple plan —Man-power plan—Report on Training for the Building Industry—Government action—A good augury.	
III. The Building Plan	27
War experience—Analysis of building turnover —The emergency period—Long-term planning —Timing—Flexibility of labour.	
IV. The Materials Plans	35
Need for adequate supplies—Cement—Bricks— Timber—Prices of materials—Rings.	
V. The Cost of Labour	39
The old incentives—Incentives under full employment—Personnel management—Works Committees—Education.	
VI. Technical Planning	43
Research—The availability of scientific data— The House Construction Committee—Heating and Ventilating Committee—Standardisation— Codes of practice.	
VII. Pre-fabrication	52
Advantages—Pre-fabrication of shell—of com- ponents.	

<i>Chapter VIII.</i>	Mass Production	<i>page</i>	58
	Mass production in motor-car industry—Mass sales—The Portal house—Mass production in peace-time—A Building Requisites Board.		

IX.	Ministry of Works	63
	M.O.W. in war-time—After the war—Control of building industry, administrative and technical—The organisation of the Ministry—Need for a strong Ministry.	

PART II

Housing

X.	Before World War I	67
	The building of the slums—Sanitary reform—Housing reform—Lessons.	
XI.	The Inter-War Period	71
	Standards of housing—Gardens—Private enterprise—The speculative builder—Quality—Baldwin Hills—The jerry-builder—The building societies—Building by local authorities—Housing in politics—Who built the working-class houses?—A fine achievement.	
XII.	Post-War: The Emergency Period	88
	Plans by Ministry of Labour—of Health—of Works—Proposed number of houses to be built.	
XIII.	The Long-Term Programme	90
	Post-war demand for houses—Government programme—A programme for twenty years—Delay slum clearance—Number of slum houses—The obsolescent house—The three stages of building.	
XIV.	Standards	97
	The Dudley Report—What can we afford?—Use of heat in dwellings—Gardens and open spaces—The Bed-Sitting room.	
XV.	Costs, Rents and Subsidies	109
	The financial problem—Costs—Rate of interest—Rates—Subsidies—Estimated annual total £100 million.	

Chapter XVI. Private Enterprise or Local Authority Building *page 116*

Inter-war building of houses: 70% by speculative builders, 30% by local authorities—Post-war demand mainly for slum clearance—Eight arguments for local authority building—Housing associations should be developed—Local authorities should build 75%—The Pole Report.

PART III

Planning : Foreign Examples

- XVII. The Five Essentials** 127
The planning authorities—Land—Finance—The plans—Drive.
- XVIII. Moscow—The Planner's Paradise** 129
The Mossoviet—Land publicly owned—Finance not a problem—The ten-year plan—Drive.
- XIX. The Tennessee Valley Authority** 133
The dams—The welfare of the region—Achievements—Public opinion—Constitution—Staff—Democratic planning—Effective leadership.
- XX. Planning and Building in the U.S.A.** 142
Expansion of cities—Housing—Gardens—Skyscrapers—Civic buildings—Highways—Bridges and dams—Parks—Zoning—Blighted areas—City planning commissions—Los Angeles—New York—What can we learn in Britain?
- XXI. Zurich and Stockholm** 157
Zurich—Bern—Stockholm.

PART IV

Planning : Britain

- XXII. Introduction** 163
Beginnings of town planning—Barlow Report—Uthwatt Committee.
- XXIII. Land** 165
Difficulties of control of use—Uthwatt Report—White Paper on "Control of Land Use"—Conflicting views—Land purchase by local authorities.

<i>Chapter XXIV.</i>	Roads	<i>page</i>	171
	Numbers of cars in Britain and U.S.A.—The motorist's case—The case for public transport—Number of cars may be doubled.		
XXV.	The Size of Towns		178
	Discussion of size of various towns—The right size for government—for efficient industry.		
XXVI.	The Location of Industry		180
	Need for control—A hundred new towns—The green wedge—Development areas—Decentralisation—New garden cities—Methods of controlling location.		
XXVII.	The Neighbourhood Unit		188
	New development in planning—The Wythen-shawe unit—The Duddeston Re-development Area—Functions of local authorities and private enterprise—Importance of neighbourhood unit—Essentials for success.		
XXVIII.	Manchester		194
	The city of Manchester—Evidence of Barlow Commission—Need for more factories—Wythen-shawe—Manchester's plans—An overspill of 50,000 dwellings—A regional capital—Financial aspects—Local government areas—Loss of rateable value—A single all-purpose authority—Segregation of leadership.		
XXIX.	Local Authorities		212
	An outburst of planning—Density—Flats or cottages—Open development—Re-development in central areas—Overall densities—Overspill—Finance—Reform of local government—Municipal research bureaux—A Royal Commission.		
XXX.	The Conditions of Success		222
	The Ministry of Town and Country Planning—Drive and money.		
XXXI.	Conclusion		225
	The economic background—Public enterprise—Can democracy plan in peace-time?—The task of the seven Ministries—The vital importance of public opinion.		

<i>Appendix</i> I.	Definitions of Rent and of Housing Standards	<i>page</i> 234
II.	Control of Quality of Houses	235
III.	Extract from Memorandum submitted to the Royal Automobile Club by W. Rees Jeffreys	239
IV.	Extract from Report on Duddeston Re-development Area, by H. J. Manzoni, C.B.E., M.Inst.C.E., City Engineer and Surveyor of Birmingham	243
V.	First Interim Report of Post-War Reconstruction Committee of Manchester City Council	245
VI.	Extract from Report on Housing and Rehousing by L. H. Keay, F.R.I.B.A., City Architect and Director of Housing of Liverpool	253
	Tables	254-256

LIST OF ILLUSTRATIONS

Between pp. 128 and 129

- A typical Manchester backview
- Wythenshawe : Manchester's satellite garden town
- Wythenshawe : Showing housing types and architecture
- The beginning of Manchester Civic Centre, showing the
Municipal Library and Town Hall Extension
- The pre-fabricated kitchen unit in the Portal house
- The Roof Pool on the Sidney Street Estate Flats, St. Pancras, London
- Stockholm Town Hall
- Vienna : Municipal housing
- Moscow : General view of the Kremlin
- New York City : Traffic separation on the Henry Hudson
Parkway
- New York City : General view of East River Drive
- New York City : The Bronx-Whitestone Bridge
- New York City : The New Jersey end of the Lincoln Tunnel,
under the Hudson River
- Los Angeles : The City Hall
- Chicago : Union Station
- Chicago : North Avenue, showing rising curb for separating
traffic at different peak periods

PART ONE

BUILDING

CHAPTER I

BUILDING: INTER-WAR

SUCCESS IN REBUILDING Britain depends on a well-organised and efficient building industry. Unfortunately, during the inter-war years the building industry suffered, through no fault of its own, especially in the early years, from almost chaotic conditions. The Armistice was quickly followed by the greatest boom in the history of the industry. This was partly due to the general boom which occurred throughout the industrial system, which would of itself have caused high prices in the building industry, but was made worse by a separate building boom. Immediately after the Armistice there was an overwhelming demand for repairs and for buildings of all kinds; in particular, there was a demand for luxury buildings, such as cinemas, so urgent that the work was done almost regardless of cost.

But the Government had made no plans¹ for the industry, nor did it, when the crisis arose, make any effort to ensure that the demand for buildings should be within the capacity of the industry. On the contrary, though he saw luxury buildings being rushed up regardless of cost, the Minister of Health went out of his way to say that the Government would not "undertake the administration of any scheme of prohibition of luxury building by a system of licences. We did that during the war and I never want it again. It is irksome and irritating to everyone."

I have particularly strong feelings on this matter because from 1919 to 1923 I was Chairman of the Manchester Housing Committee, and lived through a dramatic, and indeed shocking, experience of the chaos and waste which resulted from the attempt at that time to expand the building industry very rapidly without previous planning.

The local authorities had no experience in building; they had to create their organisations and to get their experience. In Manchester, the City Council decided to build 4,000 houses a

¹ This is fully discussed in a valuable appendix to the Report to the Ministry of Works on the Placing and Management of Contracts in the Building Industry.

year. We placed contracts with large and small builders, we tried building by direct labour. As soon as we had succeeded in placing substantial contracts we found the most acute shortages both of materials and of labour. The first need was for bricklayers and bricks; neither existed in anything approaching sufficient quantities. Regardless of all this, Mr. Lloyd George kept demanding more "homes for heroes" and brought all his great powers to bear to get houses built with the utmost speed. His Minister of Health, Dr. Addison, sent me a personal message saying that no vested interests must be allowed to stand in the way, any opposition must be "ruthlessly" dealt with.

The result was that prices went higher and higher. The following table shows the increases in building wage rates and building materials.

(Base: July 1914 = 100)

	Building wage rates (London).	Building materials.	Cost-of-Living Index Number.
July 1917 . . .	111	153	160
Dec. 1918 . . .	155	210	200
July 1919 . . .	195	214	205
July 1920 . . .	270	270	250

But, owing to overtime and bonuses, the actual cost of labour increased far more than shown in this table. Working-class houses built during the boom cost about £1,000 each; ten years later the same houses were built for one-third the price. Subsidies became bigger and bigger, until the Government decided that the national finances could bear it no longer, and suddenly stopped the whole housing effort. Then came the slump. The greatest boom in the history of the building industry was succeeded by the worst slump. A bricklayer commanded a high scarcity value in 1920; shortly afterwards not less than one half of the members of the bricklayers' union were unemployed.

The Government could not have been more energetic, nor could it have been more futile. It was a superb example of the folly of trying to make up for lack of understanding and of foresight by vigorous and energetic action. The results were disastrous, and damaged the housing programme in two major ways.

Firstly, it became necessary to grant a subsidy of nearly £1 weekly for each house, in order to let the houses built at boom prices at a rent which the workers could pay. Although only 176,000 houses were built under the Addison Housing Acts, and although more than twenty years have elapsed since then,

these subsidies still impose an annual burden of over £5,000,000 on the national exchequer.

The second bad effect of the boom and the slump was to delay the organisation of the building industry for the large-scale building of houses. It will be seen from Tables III and IV (p. 255), that it was five years before the local authorities began to build on a substantial scale, and fifteen years before private enterprise put forth its full effort. In the first year after the war 700 houses were completed; in the second year 30,000. The total number built in the first quinquennium was 370,000, only one-fifth of the number built in the last quinquennium of the inter-war period.

THE SUPPLY OF LABOUR

No plans had been made for increasing the supply of skilled labour in the building industry. Trade unionists remembered the slump of 1910-1914, when first-rate bricklayers were unemployed for months on end, and they refused to agree to "dilution" or to "augmentation" of the number of craftsmen in the industry without some proper guarantee against future unemployment. No such guarantee was forthcoming.

As a result of my experience as Chairman of the Manchester Housing Committee, I wrote in 1926 as follows: ¹

"During the whole of the last five years the nation has been faced by two social problems of overwhelming importance: housing and unemployment. There have been over a million workers unemployed, and successive governments have utterly failed to find work for them. There has been a shortage of houses so acute that thousands of people have been forced to live in conditions that render health, and even elementary decency, impossible.

"All difficulties in the way of building an additional 100,000 houses each year could have been overcome if the skilled labour had been available. This would have found work for 200,000 of the unemployed. The men were willing to be trained and could have been trained and at work many years ago.

"There was only one obstacle, and that has proved insuperable: unswerving resistance of the building trade unions to any increase in their numbers."

I thought at the time that the trade unions were solely responsible for this delay; I think now that the fault lay largely with the Government. It was surely reasonable for the unions to demand some guarantee that if they agreed to dilution

¹ "A City Council from Within", p. 56.

this experience of excessive unemployment would not be repeated.

It was not until 1924 that Mr. Wheatley made a fifteen-year "treaty" with the industry, giving a guarantee of a long-range housing programme. Although this treaty was not fully supported by the Conservative Party, it was in principle accepted by the trade unions, and had some effect in giving them confidence in the future and in inducing them to relax their resistance to an increase in the number of craftsmen.

Table I (p. 254), gives the number of insured workers and the number actually employed in the building industry from year to year. The same facts are shown in the form of curves in Fig. 1. Some of the most interesting conclusions that emerge from these figures are as follows:

1. Between the years 1920 and 1923 the number of workers actually decreased year by year.

2. There was a steady rise of both employed and insured workers from 1923 to 1927.

3. From 1927 to 1932 there was each year a decrease in the number of *employed* workers, and yet during those five years the total numbers *insured* in the industry actually increased each year. It is an astonishing thing that even with uncontrolled private enterprise the number of workers in the industry should have continued to increase for five successive years, while the number employed decreased each year. No more striking evidence could be found of the need for Government control of the labour force.

4. While in the early twenties there were about 11% unemployed, the average of unemployment in the thirties was at least 15%, in spite of continuous boom conditions in the industry. Even among the craftsmen there was a similar increase from an average unemployment of 6% to an average of 12%.¹

5. Finally, and most important of all, it was not until 1934—*fifteen* years after the Armistice—that 300,000 houses were built in any one year.

Why was it, as the figures show, that unemployment was excessive even in good times and shocking in bad? Nobody wanted unemployment, except perhaps a few of the more reactionary employers, who believed that labour would be cheaper

¹ Labourers who got temporary jobs in the building industry often kept their names on the Labour Exchange books as building operatives for many years, even though they had ceased to work in the building industry; in this way the unemployment figure was artificially inflated. But this did not apply to craftsmen.

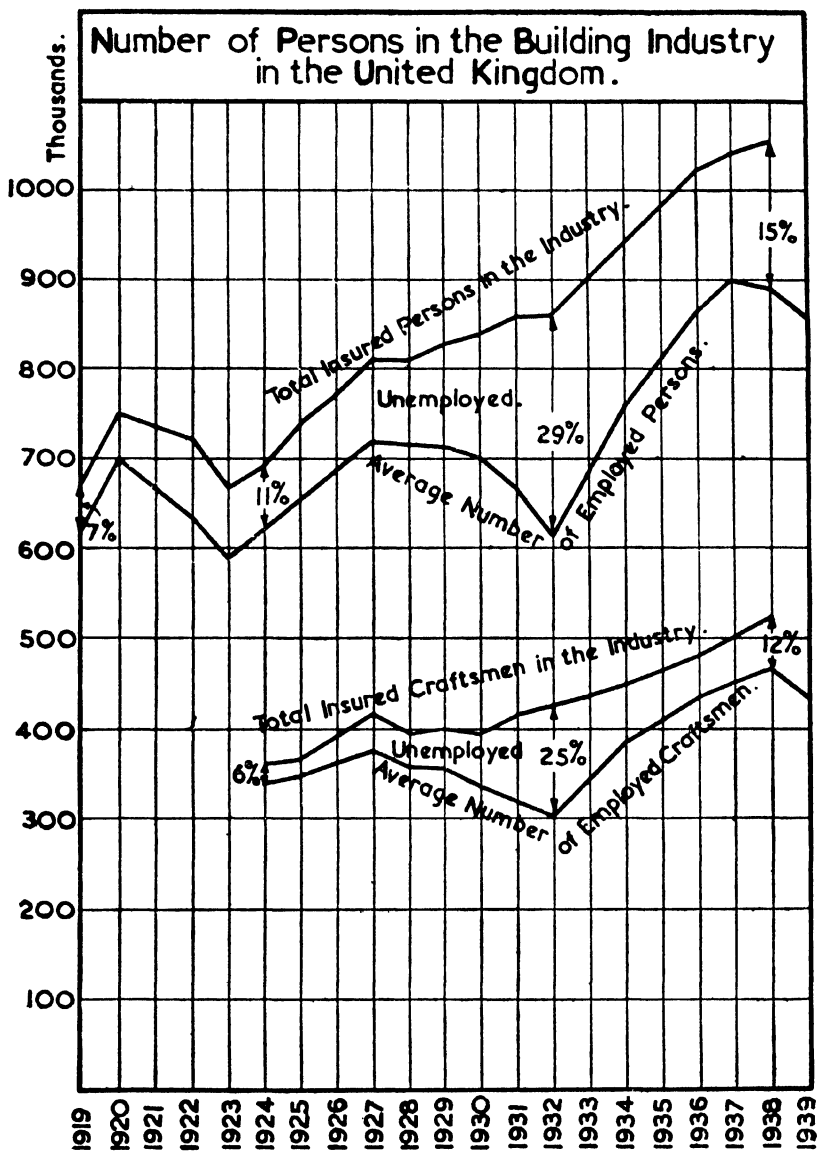


Fig. I

if they were always able to sack any man at an hour's notice and get another in his place. The public, the Government, the trade unions and the majority of the employers were always anxious to prevent unemployment by all possible means. But goodwill was not enough. It would be impossible to get more startling evidence than that provided by the figures I have quoted of the importance of Government control and planning if regular employment is to be made possible. It is utterly out of the power of the building industry to achieve this, since it depends, above all, on the right volume of orders being placed at the right time. Nobody can secure this except the Government.

CHAPTER II

THE MAN-POWER PLAN

THERE IS UNANIMOUS agreement that immediately after the Armistice there will be an immense demand for buildings of all kinds. Conditions will be similar to those in 1919, but almost certainly more acute. There will have been no building for peace purposes for more than five years, there will be bomb damage to be made good, a mass of deferred repairs and maintenance work, an urgent demand for schools and for civic, industrial and commercial buildings, and finally, most important of all, an imperative and continuing demand for houses.

On the other hand, the available number of workers in the building industry will be small, and unless the volume of orders is controlled in relation to the man-power, disaster is certain; there will be a boom as bad, or even worse than that after the last war, followed by the inevitable slump.

But we shall start the peace with great advantages as against 1919. I have described the complete failure of the Government at that date to make any plans in advance. The situation to-day is encouragingly different. The Government has made three pronouncements of outstanding importance. The first is that four million houses are to be built in about ten years after victory is achieved. As the Minister of Health said in March 1943: "It took us twenty years to build four million houses after the last war. After this war we must build at twice the rate."

The second pronouncement relates to the man-power in the industry. After the last war it took fifteen years to build up the industry to a strength of one million workers. After this war the Government intends that the number of workers shall be increased not to a million, but to one and a quarter million—not

in fifteen years, but in three or four years. That means a rate of increase more than five times as great as occurred after the last war.

The third pronouncement is contained in the White Paper on Employment Policy issued in May 1944, which begins with the words: "The Government accept as one of their primary aims and responsibilities the maintenance of a high and stable level of employment after the war."

By these three pronouncements the Government has undertaken far-reaching new responsibilities and has given an imaginative and courageous lead, showing that it expects the building industry to rebuild Britain in record time. With a building force of one and a quarter million workers it should be possible, on the one condition that prices are maintained at a reasonable level, to build in twenty years a good home for every family at a rent or price it can afford, and to erect all the necessary concomitant buildings, so planned that the father can get easily to factory, club and public-house, the mother and children to shop, school and clinic, and the whole family to libraries and places of amusement, to parks, playing-fields and open country. Let us proceed to consider in detail what steps are necessary to ensure the fulfilment of this great plan.

THE TRIPLE PLAN

To secure "a high and stable level of employment" in the building industry involves the co-ordination of three separate plans: a man-power plan, a building plan, and a materials plan.

First comes the man-power plan. It normally takes five years to train a craftsman, and once a man has been admitted as a craftsman he usually carries on his trade until he dies or retires. Any adjustment of the total man-power in the industry, whether upwards or downwards, must therefore be exceedingly slow. This means that it is not possible year by year to adjust the man-power plan to a predetermined building plan. The only practicable way of co-ordinating the two plans¹ is to settle the man-power plan at least five years in advance, basing it on the best possible long-range estimate of the national need for building during that period, and then year by year to adapt the building plan to the man-power plan.

The second is the building plan, and that is the really difficult

¹ It has been shown in the war that it is possible to train men much more quickly for all kinds of jobs than has been customary in the past; and, indeed, it has been agreed by the Ministry of Labour and trade union representatives that men are to be trained as potential craftsmen in the building industry in six months in the post-war emergency period.

problem. To maintain a high and stable level of employment, it is necessary that the right number of building orders should be placed each year. If the volume of orders is too high, prices will rise and boom conditions will follow. If the volume of orders is too low, there will be unemployment.

Thirdly, the materials plan must ensure that all the essential building materials shall be available at all times in adequate quantities and at reasonable prices to meet the requirements of the building plan.

One might add, fourthly, a financial plan. It is essential that the savings of the people shall be sufficient to allow investment in the building industry to meet the requirements of the building plan, but this is a problem for the Government as a whole; so far as the building industry is concerned, it is an overriding condition, setting a maximum to which the building plan must conform, and since the Government has decided that there shall be one and a quarter million men in the building industry, the Government must ensure that the necessary finance shall be available.

MAN-POWER PLAN

The importance of providing something approaching full employment in the building industry was first seriously studied by the Education Committee of the Ministry of Works, which was appointed by Lord Reith in August 1941. The chief duty of the Committee was to report¹ on education in the building industry, with special reference to apprenticeship.

The Committee consisted mainly of representatives of the employers and the operatives in the building industry, and its meetings were attended by representatives of the various Government departments concerned. At the very first meeting both employers and operatives emphasised that although there were many good apprenticeship schemes in the industry, none of them succeeded in training more than a tiny minority of the workers because of the serious irregularity of demand in the industry. Few employers were prepared to commit themselves to engaging apprentices for a five-year period, not knowing whether there might be a slump which would greatly cut down their powers of giving employment. Trade union leaders pointed out the evils of the boom in 1920, followed by the slump a year or two later, when 40% of their members were unemployed. They were not willing even to discuss training a large number of additional craftsmen until there was some guarantee that this kind of thing would not be repeated.

¹ "Report on Training for the Building Industry."

In short, the whole Committee agreed that any proposals for improving education in the industry would be useless unless the industry could be stabilised in the sense of securing a high and stable level of employment. A special small sub-committee was therefore appointed, with Mr. G. D. H. Cole as Chairman, including leaders of the operatives and of the employers, to consider this basic question of the expansion of the industry and the possibility of ensuring full employment.

The Committee's report was published early in 1943. The first chapter outlines the planning which is essential for the successful carrying out of the education proposals which are made in the remainder of the report. The paragraphs on planning are so important, as an authoritative statement of the point of view of leading employers and operatives, for the future of the industry that I quote them in full.

"Necessity for long-term programme. It would be unreasonable to expect such positive co-operation [between employers and skilled workers in the industry] if the industry is still to carry the heavy load of unemployment which has too long disfigured its history. It cannot be too often repeated that the adoption of a long-term programme of construction is the key to the whole problem. At the same time, however, it is as necessary that builders, and prospective builders, should *believe* in the stability of such a programme, as it is that the programme should, in fact, be steadily carried out. We submit, therefore, that the first guarantee of the success of our proposals is the issue of the most authoritative possible pronouncement to the effect that such a programme is in fact intended; and that, in the event of any threat of a general economic depression, building activity will be not diminished, but deliberately stimulated in order to offset any possible fall in employment. It is, of course, true that no Government can bind its successors, and that accordingly no such guarantee can be absolute. But it is fortunately legitimate to hope that on this particular issue all political parties are agreed. It should, therefore, be possible for a pronouncement on the principle of a long-term programme to be publicly endorsed by leading spokesmen of all parties from both inside and outside the Government; and in this way to secure a guarantee which is likely to command very wide confidence both in the building industry itself and among the general public.

"Such a declaration should, we suggest, cover a period of twenty years' activity, on a scale sufficient to keep 1,250,000 building workers employed. The speculative nature of

population forecasts, and the difficulty of estimating standards of amenity either in housing or in other fields, as well as the uncertainties of future economic development and of town and country planning, makes it difficult to predict the course of building activity for so long a period, but we expect that the needs of the immediate post-war period will make it possible for there to be a building programme prepared to cover at least ten years after the end of hostilities and thereafter there should always be an actual building programme for a period of at least five years ahead. To secure this the programme should be reviewed each year (after the first five years from the commencement of the ten-year programme) for at least that minimum period.

"Necessity for guaranteed week. The proposed guarantee of a long-term programme should not stand alone. In the past, the building industry has suffered not only from unemployment in the ordinary sense, but also from the special form of discontinuous employment known as 'wet time'. During the war the building workers have experienced, at least on public contracts, the benefit of a guaranteed week. Such continuity of employment ought, in our judgment, to be maintained after the war, and should indeed become a regular term in contracts of building employment.

"The working time for which payment would be thus guaranteed may need to be a matter for negotiation within the industry itself, but the success of the guarantee is dependent upon its compulsory application by law to the whole industry. Otherwise those who observe the agreed minimum will legitimately complain of the unfair competition of those who do not. The statutory enforcement of agreed minimum conditions of employment in the road transport industry affords a precedent for legislation along these lines.

"Need to regulate numbers. Finally there must be an authoritative body (such as the Council which we propose below), of sufficient influence to ensure that at all stages the 'Man-Power Plan' harmonises with the 'Building Plan' and that the margin of insured over employed workers is kept at a minimum.

"If, in addition to the other safeguards we have mentioned, this regulation of numbers is effective, we are of opinion that the craftsman already in the industry, as well as each new entrant, may look forward to a long period of prosperity for the industry and regulated employment for himself. Should the industry at any time be threatened with an excess of man-power, the proposed Council would be expected to take the necessary steps to ensure that balance is maintained."

It was my privilege to be Chairman of the Committee, and I was impressed and encouraged by the way in which trade unionists and employers co-operated in putting the national interest first in their discussions. After a year's hard work the Committee unanimously signed the report, recommending an immense increase in the number of workers in the industry, and laying down the conditions under which they were prepared to accept it. The report recommends bringing the numbers in the industry in three years after the Armistice to a substantially higher figure than was reached in twenty years after the last war. And this proposal has been accepted by the trade union leaders themselves, subject of course to proper Government guarantees. Can one imagine any more striking evidence of the advantages of co-operative planning by the Government and industry, as against the old system of *laissez-faire*?

GOVERNMENT ACTION

The Report of the Education Committee was sent to the Minister of Works in the late autumn of 1942. In February 1943 the Government produced a White Paper, Cmd. 6248, "Training for the Building Industry".

The main Government decisions embodied in the White Paper are as follows:

1. There is to be a post-war construction programme for ten to twelve years, which it is estimated will require the labour force in the building industry to be built up over a period to about one and a quarter million men.

2. The Ministry of Labour will undertake the full responsibility for the special training, during a period of six months, of up to 200,000 trainees during the first three or four years after the war. The Government will pay the cost of this training.

3. Recruitment into the industry must be regulated so as to correspond as closely as possible with estimated future demands. The aim will be to maintain stability in the industry for the period of the programme.

4. The Government will favour the adoption by the building industry of measures for a guaranteed period of employment each week, and is prepared, at least during the immediate post-war period, to take steps to enforce this on all contractors if the industry as a whole desires it.

5. An Apprenticeship and Training Council will be set up as recommended by the Education Committee.

The Apprenticeship and Training Council has been set up with

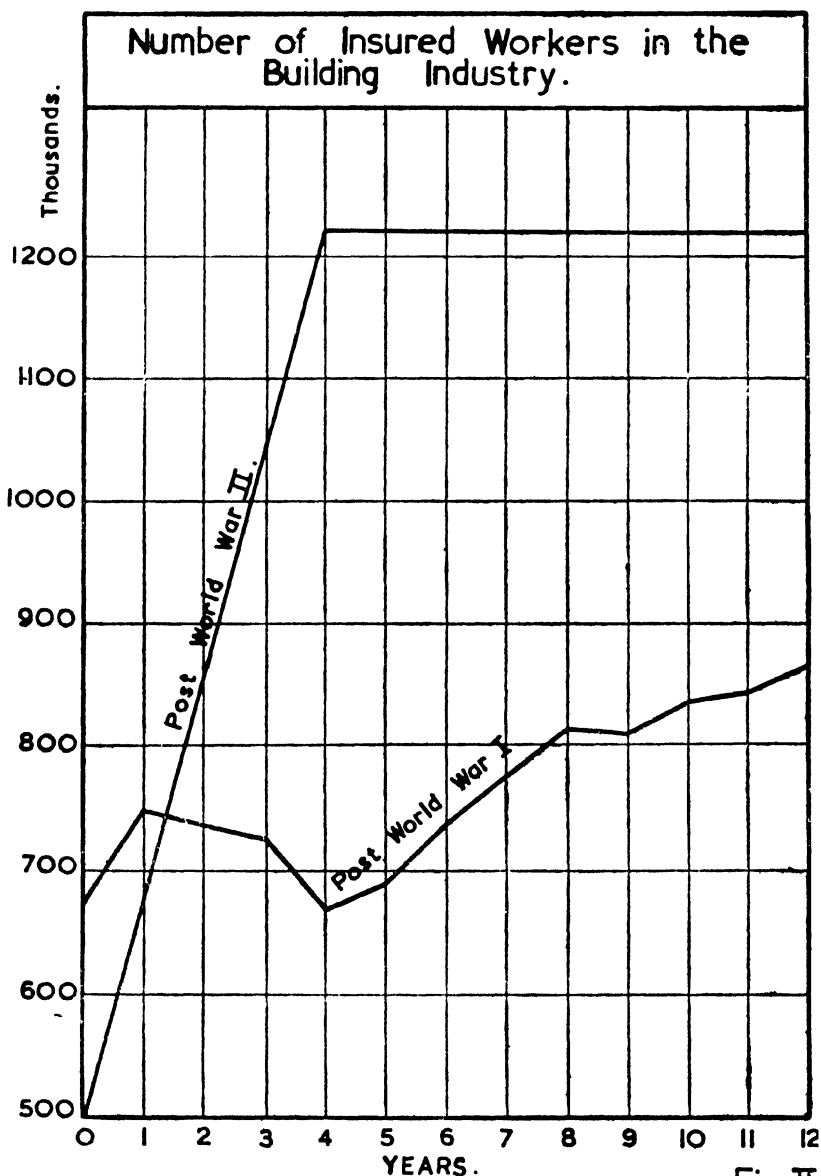


Fig. II

Sir Malcolm Trustram Eve as Chairman, and has already produced its first reports.

The effect of these decisions on the man-power in the industry, if continuously enforced by successive Governments, is shown rather dramatically in Fig. II.

A GOOD AUGURY

These decisions, coupled with the declaration in the White Paper on "Training for the Building Industry" quoted above, probably go as far as it is practicable for the Government to go in war-time towards meeting the conditions suggested by the Education Committee as being necessary for the successful and rapid expansion of the industry.

Government committees are often held to be a means of delaying action. In the case of the Education Committee there would have been some excuse for delay: the report dealt with a difficult and controversial issue which had to be discussed and agreed by the Ministry of Works, the Ministry of Labour, the Ministry of Health, the Scottish Office and the Treasury. Yet within two months of receiving the report the Government issued its White Paper, accepting all the recommendations of the report with minor modifications.

This was the first long-range piece of post-war planning to be officially adopted by the Government. It is a good augury for the energy and vision with which the Minister of Works and the Minister of Labour are preparing for the problems of peace.

CHAPTER III

THE BUILDING PLAN

ONCE THE MAN-POWER plan is settled, the next problem is the framing of a building plan which will ensure that orders shall be placed in such quantities as to give full employment and no more than full employment. To achieve this would mean that each month in every district exactly the right numbers and kinds of orders should be placed on agreed time programmes as to the amount of labour required over the whole period of each contract; and that these contracts should all be carried out exactly according to programme. This is clearly a task of the utmost difficulty. For instance, if a firm sees a good opportunity of extending its business and has the necessary capital available, it may decide that a factory extension has suddenly become of the utmost

urgency. If it is delayed, the business may be lost. No Government would desire to interfere with such an extension if such interference could possibly be avoided. To take another instance, if a speculative builder feels that he is assured of a market, and wishes to push ahead energetically, it will be difficult for the Government to stop him. On the other hand, if he does not think that there is likely to be a profitable market for his houses, no Government could possibly force him to build against his own wishes.

Even when a programme has been agreed, difficulties will occur. A firm which has been given permission to extend may change its plans and refuse to go on. Or a firm may obtain a licence to build a factory on a selected site, estimated to employ a given number of men, rising to a certain maximum over a period of twelve months. It may well happen in practice that work begins six months later than estimated and that the numbers employed at the peak are 30% more than was foreseen. Experience proves conclusively that though some firms and architects are able to estimate their labour demands with a good deal of accuracy in advance, in most cases the estimates are unreliable.

It is therefore quite clear that really accurate control of the demand for labour can in practice not be achieved. Full employment is an unreal ideal. The Government's phrase in its White Paper on Employment Policy—"a high and stable level of employment"—expresses well a practical aim for the building industry.

WAR EXPERIENCE

The Ministry of Works has been responsible during the war for preparing a building plan, and in conjunction with the Ministry of Labour for seeing that it is enforced. The two Ministries have in this way gained valuable experience. Orders have been divided into two categories: those under £100, for which no licence has been required, and those over £100, which may be undertaken only by licence or by special permission.

As regards the larger contracts, the Ministry first experimented unsuccessfully with various methods of regulating the amount of building done by various Government departments by means of a priority system; this was given up as a failure. The Ministry then gradually worked out a system of allocating all the available building labour for each three-monthly period among the Government departments. All building during war (except repairs) is either carried out or sponsored by a Government department, and the allocation committee allots a definite amount of labour to each of about twenty Government departments for each period. For instance, the Air Ministry might have an alloca-

tion of 50,000. This means that the Air Ministry can itself proceed, or authorise other people to proceed, with work employing up to 50,000 persons during the allocation period. If the Ministry tried to exceed its quota the Ministry of Labour would refuse to provide the additional labour.

Local authority work is included in the allocation of the Ministry of Health, which divides it among all the local authorities. Work done by private persons or firms, not sponsored by any other Government department, is dealt with by the licensing department of the Ministry of Works.

Scarce materials, such as steel and timber, are allocated to the various Government departments so far as they are necessary to enable them to use their labour allocation to the full. The Ministry of Works has set up special departments to ensure that scarce materials, especially timber, shall be used as economically as possible.

After several years' experience, all the main departments have built up staffs able to control their building programmes and to ensure that the labour they employ shall be within about 5% of the allocation. The whole system, as it operated in the later stages of the war, succeeded in dealing effectively with a very difficult and complicated problem.

As regards the orders under £100, which are free from licence, these have been limited mainly by the Government control of labour and of materials. It has been difficult to get labour and materials for these small jobs; and, in addition to that, people have been patriotically willing to defer repairs, and even urgent maintenance work, in the interests of the war. For these various reasons, the amount of labour and materials employed on these small jobs has not been excessive; indeed, this work has not presented a serious problem.

ANALYSIS OF BUILDING TURNOVER

To enable us to consider methods of controlling the volume of work after the war, we must form some estimate as to how this is likely to be made up. The only available evidence is the inter-war figures, as given in Table II (p. 254). The table shows that roughly 50% of the expenditure was on dwellings, 25% on other building, and 25% on repairs. It should be noted that direct Government expenditure on building rose from about £10 million in 1935 to £40 million in 1938. It is surprising that in spite of this unusually heavy Government expenditure, new dwellings still represented nearly 50% of the total building in 1938.

If we consider the ten-year period immediately after the emer-

gency period of two or three years, it is probable that repairs may again represent about one-quarter of the total expenditure.

Civic buildings of all kinds should be required on a great scale. School buildings are likely to be the most important item. In America, in almost every small town or village the school is the most important building. It is a centre of civic activity and of civic pride. And the universities and colleges have buildings on a scale which hitherto has not even been thought of in this country. Thousands of schools here are quite unfit for their purpose. An intensive campaign for the erection of fine educational buildings should be almost the core of the campaign for rebuilding Britain.

There must be a great development of health centres and of hospitals. Civic centres worthy of the name hardly exist in this country. Here again, most American cities have during the last twenty years planned and made substantial progress towards building well-designed civic centres on a generous scale.

Most railway stations are obsolete, and all are miserably designed compared with the best stations in Germany, Italy and America. The development of road transport will call for a large increase in the numbers of garages and bus stations.

The demand for new factories can hardly be guessed, but we have only made a beginning in the building of well-designed factory areas, with all the necessary facilities for transport of goods and easy access to housing.

And it is to be hoped that at least a few garden cities and satellite garden towns will be built, involving all kinds of ancillary building in addition to the main categories already mentioned.

The demand for dwellings is settled by the Government's declaration that it proposes to build four million houses in about ten years. This will mean in normal years after the emergency period an average of from 400,000 to 500,000 houses each year. This is likely to employ something approaching 50% of the available labour, so that the best guess one can make is that the total building labour force will again be divided as follows:

Housing : one half.

Other new building : one quarter.

Repairs : one quarter.

THE EMERGENCY PERIOD

The Government has wisely announced that for the purposes of the building industry it proposes to treat the first two or three years after the war as an emergency period. It is likely that there may be perhaps 400,000 workers in the building industry at the time of the Armistice; these are to be increased up to one and a

quarter million in a period of about four years. There will immediately after the armistice be not only an imperative but possibly even a violent demand for the repair of bomb damage, for housing and for all sorts of urgent building.

One specially dangerous aspect will be the rush for deferred repairs and maintenance. Hotel proprietors urgently desirous of putting their hotels into peace-time condition for their guests will be willing to pay very high prices. Firms will want to clean up the dingy appearance of their offices and of their works. Above all, the twelve million householders who have refrained from decorating their houses during the war will demand the right to get their work done quickly. Indeed, the demand for small repair and maintenance work, for which owners are likely to be willing to pay very high prices, may in itself, if not drastically controlled, be enough to start inflation in the building industry. It is probable that repairs and maintenance alone, if uncontrolled, might absorb the whole of the building industry labour for the first two years.

This is likely to be one of the most difficult problems the Ministry of Works will have to face. It may be necessary to reduce the limit of freedom from licence from £100 to possibly £10 or even to as low a figure as £5. The effective enforcement of such a limit will be politically difficult and unpleasant, but absolutely vital. It will be the first test of the efficiency of the Ministry of Works and of the courage of the Government as a whole towards securing a stable and high level of employment.

LONG-TERM PLANNING

Employment in the building industry is largely dependent on the general economic situation. Unless the Government succeeds in preventing the violent fluctuations of boom and slump which occurred in the inter-war period, nothing can save the building industry from the same fate. It is, therefore, of the first importance that the Government in the White Paper on Employment Policy has stated that it "is prepared to accept in future the responsibility for taking action at the earliest possible moment to arrest a threatened slump. This involves a new approach and a new responsibility for the State."

The Government goes on to say that it is essential to maintain total national expenditure at a steady level. "Public capital expenditure has in the past fluctuated considerably, largely because public authorities have often¹ taken the view that in a period of depression, when their revenue was precarious, economy of capital expenditure was the right policy."

¹ Would not "always" be nearer the truth?

The Government then continues with what may fairly be called an epoch-making declaration, that in future "public investment, both in timing and in volume, must be carefully planned to offset unavoidable fluctuations in private investment".

This represents a complete revolution from the practice of successive governments in the inter-war period. It is an admirable statement of the principle which, if acted upon, should make it possible to preserve a high and stable level of employment. From the point of view of the building industry it could hardly be better.

So long as this policy of the Government is effectively enforced, the problems of the building industry should be manageable. The volume of private investment in the building industry is sure to vary from time to time, and must be regulated by the Government, on the one hand by licensing, to prevent excessive investment in times of threatened boom, and on the other hand by public works, to increase the total volume of investment in times of impending slump.

In times of threatened boom it should not be difficult for the Ministry of Works to prevent the volume of building becoming excessive by an effective licensing system. The Ministry will have to expand its licensing department, which already has a regional organisation, so as to be able to deal with a vast mass of individual applications. It may be desirable to use the Ministry of Health to make allocations to local authorities; it may be desirable to use local authorities to license certain classes of individuals in their areas.

The problem of increasing the volume of investment in times of threatened slump is likely to be much more difficult. The Government has already announced that local authorities are to have a five-year moving programme of public works, and that the works planned for the first year should be ready to put in hand at a moment's notice. An interesting example of what can be done by bold planning is given by the city of New York. The Council has already issued a statement giving particulars of nearly £200 million worth of public works which it proposes to execute after the war. And, what is more important, it has authorised the expenditure of no less than £5 million for preparing the necessary drawings and specifications, in order to be ready to place the whole of these contracts at very short notice. This is an example which British local authorities would do well to follow.

TIMING

. A matter of great importance and difficulty is the timing of the placing of orders so as to ensure a steady volume of work. As

regards general buildings, apart from dwellings and repairs, this constitutes largely the private enterprise building, for variations in which the Government has to find compensation. The amount of public building included in this figure which might be influenced by the Government is likely to be too small to be of importance.

Repairs, which are likely to account for about 25% of the building industry, are hard to control as regards time; it is possible that the Government might devise methods of varying the volume of this work to suit its policy. Certain suggestions in this matter are made in the White Paper, and it is important that experiments should be made in this direction.

Coming to housing, it will be almost impossible for the Government to exert any substantial influence on the timing of the work of the speculative builder. While its work could be reduced in volume by licensing in times of boom, it would hardly be possible for the Government to persuade or force speculative builders to build at a time when they were doubtful about the market. This could only be done by subsidy, a method which for this purpose is generally agreed to be expensive and undesirable.

We are, therefore, forced to the conclusion that it is only local authority housing which can provide any substantial volume of building work, the timing of which could be varied by the influence or direction of the Government. Supposing, for example, Liverpool has a housing programme of 5,000 municipal houses each year. It might be possible for the Government to instruct Liverpool to make such preparations that in any given year it could increase this programme to 7,500, or, alternatively, decrease it to 2,500. If one can assume that local authorities will have a programme of 250,000 houses a year for the post-war decade after the emergency period, then on the same proportions this could be increased by 100,000 or decreased by 100,000. Since a house occupies one man/year of building-trade labour, this means that the Government could either absorb an additional 100,000 men by local authority housing or set free 100,000: that is to say, from a period of minimum local authority activity up to a period of maximum, there would be an additional demand for 200,000 building-trade workers. If the basis of this calculation can be regarded as reasonable, and if the Government had the courage and the power to compel local authorities to act on these lines in accordance with Government directions, then local authority housing would be a very powerful weapon in maintaining steady employment in the building industry.

Unfortunately, the Government, in its White Paper on Employment Policy, after making the excellent declarations which have

been quoted above, proceeds to hedge, and to point out how difficult it will be in times of prospective boom to postpone or to accelerate capital expenditure of public authorities. It points out that the satisfaction of the demand for housing "cannot readily be postponed to serve the purposes of employment policy". I have shown that housing in pre-war days was 50% of the building industry. There can be no doubt whatever that unless local authority housing can be slowed down in times when private enterprise is spending heavily in the building industry, the whole idea of the Government having any real influence on the regularity of building becomes meaningless. Unless housing can be accelerated or delayed to about the extent suggested, booms and slumps will continue in the building industry.

FLEXIBILITY OF LABOUR

One major difficulty in securing full employment is that in general the skilled craftsman expects to work at his own craft and near his own home. It is true that the industry has in the past been to a reasonable extent mobile; it appears likely, however, that the new social insurance schemes may operate against mobility in the future. Unfortunately, it is quite outside the range of possibility to frame a building plan which will month by month and in every district just give full employment to all the craftsmen who happen to live in that district. Unless a considerable degree of flexibility is introduced, anything approaching continuous full employment becomes an impossibility.

During the war there has been a good deal of geographical mobility; craftsmen have gone where they have been sent by the Ministry of Labour, partly under compulsion, partly because they have been paid extra allowances for doing so, and partly on account of a sense of duty in war-time. It is most important that something approaching the same degree of readiness to move should be made possible in peace-time, especially for the unmarried men.

The other rigidity which would make full employment difficult is that the industry is divided into a number of separate crafts, and that there is a strict line of demarcation between the functions of the different crafts. This has arisen quite naturally owing to the desire of each group of craftsmen to strengthen their own position and to prevent the risk of unemployment.

If the proposed stabilisation of the building industry is successful, so that the craftsmen gain confidence that they will never suffer serious unemployment and that they will have adequate income from insurance in case of temporary unemployment, then

the old motives for the separate crafts disappear, and there is no reason why a good deal of flexibility should not be introduced. A large proportion of the men could learn two or three crafts, and there might be a reversion to the old type of the millwright or handy-man who could turn his hand to several different skilled building processes.

These are difficult and controversial matters; they must be dealt with by the Ministry of Labour in co-operation with the trade unions. It is of the first importance that methods should be found for securing much more flexibility, both geographical and functional; otherwise stable employment at a high level in the building industry will almost certainly be impossible.

CHAPTER IV

THE MATERIALS PLANS

THE PLANS for the different materials are a simpler matter. Once the building plan is settled it is possible to calculate the approximate demand for each separate material for some years ahead.

In the case of the building plan, it is essential that there should be neither a surplus nor a deficiency of contracts in relation to the available supply of labour. No such necessity arises in connection with materials; all that matters from the point of view of the building industry is that there should be not less than an adequate supply of each essential material, and that the price should be reasonable.

It is, of course, not possible to foresee the exact proportions in which the different materials will be used. I well remember my experience as Chairman of the Manchester Housing Committee after the last war, when bricks were not available and for three or four years we spent a large part of our energies experimenting with different materials: steel, timber, concrete of all sorts, and so on. In the end an adequate supply of bricks became available, and with a sigh of relief every housing committee in the country dropped the alternatives and went back to the brick house, so successful since the days of Babylon, as being better and cheaper.

It is true that there has been progress since then, and that the Burt Committee¹ has reported favourably on other forms of

¹ An Interdepartmental Committee appointed by the Minister of Health, the Secretary of State for Scotland, and the Minister of Works, under the chairmanship of Sir George Burt.

building. Some experts think that bricks will continue indefinitely to be the main material for building the walls of houses; I have heard a very high engineering authority express the contrary opinion, to the effect that in twenty years bricks will no longer be used in any quantity. However, these changes occur gradually, and there should be plenty of time to prepare for them.

During the emergency period after the war, building output will still be low, and essential materials, with the exception of properly seasoned timber, will be available. If all goes well, the industry should, about the fourth or fifth year after the war, exceed the pre-war output by 20% or 30%, and expansion in many of the material industries will be necessary in order to meet requirements. But, since the demand will be known well ahead, there should not be any serious difficulty.

A report was issued in 1941 by the Balfour Committee on Cement Production (Cmd. 6282) which concluded that the existing works should be able to meet the greatest demand that might arise during the first two years after the war, and that there should be no difficulty during that period in making any extensions which might be necessary to meet any anticipated demand from the increased building programme.

The Simmonds Committee on the Brick Industry has issued three reports. In accordance with its recommendation, brick works not required during the war have been placed on a "care and maintenance" basis, in order that it may be possible to get them all to work quickly at full capacity when the post-war demand arises.

There is not likely to be any difficulty about iron or steel or about most of the minor materials and fittings required in house-building, though some of them will require careful watching.

Timber is the one outstanding difficulty. The shortage during the war has been exceedingly acute, and the Ministry of Works has made every possible effort to cut down the use of timber to the absolute minimum in all buildings, on the one hand by good planning, and on the other hand by the maximum use of alternative materials.

It is generally thought that there will be a very serious, though decreasing, shortage of properly seasoned timber at least in the early post-war months, and this is likely to be the main difficulty from the point of view of materials. Apart from timber, there seems to be no reason to fear that the ordinary laws of supply and demand will fail to ensure adequate supplies of all necessary materials.

PRICES OF MATERIALS

The only serious difficulty that seems likely to arise as regards materials is that of the price. Every industry which provides something required for buildings will have a guaranteed output for a long period: expansion of unparalleled rapidity for three or four years to an output of about 30% above the previous record of 1938, followed by at least ten years at the maximum level, may confidently be expected. This will provide an almost irresistible opportunity to get together, to make hay while the sun shines, to build reserves in preparation for the bad times which may come ten years later.

The last report on rings in the building industry was in 1919, when the Report of the Committee on Trusts (C. 9236) included an appendix on Combinations in Building Material Trades. This showed the extent to which building materials were subject to control:

Uncontrolled	.	.	.	.	42%
Partially controlled	.	.	.	.	33%
Controlled	.	.	.	.	25%

The Committee stated that "in every case examined the primary object has been to regulate prices", and it added as an example of the danger that:

"One of the most powerful associations, whose membership manufactures goods needed in the construction of workmen's cottages, had until recently, at the head of its rules:—

'(1) The object the Association has in view is that of raising and keeping up the price to the buyer of goods and articles made and/or supplied by its members.

'(2) This shall be done by means of pooling arrangements so controlling production that prices will rise naturally and inevitably, as they almost always must do when supply is brought into equilibrium with or is ever so little below demand.'"

The Committee had not adequate facilities or staff. It found that:

"The subterranean methods employed by price maintenance combinations can only be properly appreciated by full disclosures and a thorough examination of the regulations governing the associations and the books of the trades concerned."

It therefore recommended the appointment of a Commission of Enquiry furnished with adequate powers.

Nothing was done, and it seems probable that the number and strength of the rings have increased. Some may be efficient and by their efficiency may succeed in providing a better article at a lower price. It is commonly believed that others follow the bad old methods of restriction of output and high prices, without securing the efficiency which a good combination ought to ensure.

The report of a Mission appointed by the Minister of Works on "Methods of Building in the U.S.A.", published in 1944, gives deeply disturbing evidence as to prices of materials in the U.S.A. and Britain respectively. It appears to emerge from the report that, whereas wage rates in the United States are about two and a half times those in Britain, the average price of the principal building materials in the U.S.A.¹ is sometimes a little more and sometimes a little less than the British price, on the average perhaps 10% more. This would seem to mean that given the American degree of efficiency in the production of these materials, British prices should be about half of what they are. If this is correct, it is an exceedingly serious matter. No doubt the large scale of American production and their easy access to certain minerals may account for some of the difference. But it would seem to be at least probable that British prices are unduly high, and that this may be partly due to the action of trade associations. The evidence of this seems to be strong enough to make it urgently desirable for the Government to send one or more technical and economic missions of enquiry to the U.S.A. to seek evidence as to whether and how far American efficiency in the production of building materials is higher than British, and what are the reasons.

The matter is dealt with officially by the Government in the White Paper on Employment Policy in paragraph 54, as follows :

"There has in recent years been a growing tendency towards combines and towards agreements, both national and international, by which manufacturers have sought to control prices and output, to divide markets and to fix conditions of sale. Such agreements or combines do not necessarily operate against the public interest; but the power to do so is there. The Government will therefore seek power to inform themselves of the extent and effect of restrictive agreements, and of the activities of combines; and to take appropriate action to check practices which may bring advantages to sectional producing interests but work to the detriment of the country as a whole."

This question of building-material prices may be a major cause

¹ Excluding timber, the price of which in the U.S.A. is only about half that in Britain.

of high building costs in what are likely to be the prosperous post-war years. It is of urgent importance that the Government should take the matter seriously and, as suggested in the White Paper, secure from Parliament without delay the necessary powers of investigation and action.

CHAPTER V

THE COST OF LABOUR

THE OLD INCENTIVES

IN THE INTER-WAR period over 40% of the cost of the standard brick house consisted of labour on the site. The cost of labour has therefore been, and will undoubtedly continue to be, a major part of the final cost of a house.

If the Government succeeds in securing a high and stable level of employment in the industry after the war, and if a complete system of social insurance on the Beveridge lines is carried through, then quite new conditions of employment will arise. In the past, the fear of dismissal has been, in the opinion of many employers, one of the most important factors in securing a good output, at least from a large proportion of the workers.

One contractor who has been conspicuously successful both in peace and in war told me that full employment during the war has meant a grievous reduction in output, in spite of the strong patriotic motive for hard work. If his colleagues would all sack 10% of their men and loyally keep to this, so that the incompetents could be got rid of, the output of the industry would immediately rise by 30%. This was indignantly denied by other employers and, of course, by trade unionists; though nobody denies the existence of a few slackers who will take any advantages they can.

Another incentive in the past was payment by results. Officially this did not exist; in practice there was a good deal of it. During the war a bonus system was accepted by the industry at the instance of the Government. Opinions as to its success differ, but undoubtedly it was the cause of substantially increased output in many cases. It has not proved generally popular. The trade unions are against it; it is particularly difficult to work out a fair system of payment by results in the building industry. On the whole it seems likely to disappear after the war.

That means that the incentives of fear of being sacked on the one hand, and of personal gain on the other, will be largely gone.

The workers will have a secure job ; or when one job comes to an end they will have no difficulty in finding another quickly. After all, this is the condition which has long prevailed in the civil service, on the railways, and in other industries where there has been full employment with no payment by results, and there has been no reason to suppose that the output in these industries has been less than in the building industry.

In any case, the Government has firmly declared that it intends to maintain full employment. Let us, therefore, consider the very important question of incentives to output in the building industry under these new conditions.

INCENTIVES UNDER FULL EMPLOYMENT

In the first place, it must be remembered that the fear of unemployment by no means always produced hard work ; it often acted in exactly the opposite direction. When a man was drawing near the end of a job and did not see another ahead of him, he naturally made the job last as long as he could. This is only human nature, and is brought home to one by the story of the lady who was worried about the time taken by a bricklayer in finishing a new wall in her back garden. One morning she went out to inspect progress, and finding the bricklayer away, asked his son when the wall would be finished. "Father has gone after another job," said the boy ; "if he gets it the wall will be finished this afternoon ; if not, heaven knows how long it will take."

The rate at which a man works on a building job depends on a variety of factors. If he is a good craftsman, he works for the love of the job, without thought of profit. The general rate of working is largely a matter of custom, influenced by a series of motives which are rarely analysed. But in recent years a good deal of research has been undertaken into the problems of personnel management, and general agreement is emerging among those who have studied the matter that the output in any factory depends more on good leadership than on any other single factor ; possibly, indeed, more than on all other factors combined.

PERSONNEL MANAGEMENT ¹

It is now realised that the management of human beings—personnel management—is an exceedingly difficult and a most important part of the whole problem of management. This may be illustrated by an example given by an investigator who

¹ This is dealt with authoritatively in the report to the Ministry of Works on the Placing and Management of Contracts, Chapter VIII.

recently advised two firms in the same industry on questions of production. In one firm the weekly pay-packet was high and conditions were excellent. But personnel management was bad, and a small number of men were earning one-third more than the majority. This was not based on a national agreement, and the majority held there were no grounds for this differentiation. It caused acute jealousy; there was bad feeling throughout the factory; production was low. In the other firm the pay-packet averaged 30% lower and conditions were bad. But management was outstandingly good and sympathetic; the workers were contented, and production was a good deal better than in the first firm.

Hitherto, it has been the practice in the building industry to select and promote foremen and managers mainly on grounds of technical qualities and drive. These qualities are, of course, essential, but to be successful with labour a manager must also have

- (a) an active interest in human beings;
- (b) a strict sense of fairness and capacity to inspire confidence among the workers in his integrity;
- (c) the power not only to drive but to praise and encourage judiciously;
- (d) the power to make those working for him feel that they are "part of the show"; to inspire interest in, and a sense of responsibility for the job that is being undertaken at any given time.

There can be little doubt that the selection and training of personnel managers is one of the aspects of the building industry in which there is most room for improvement.

WORKS COMMITTEES

However closely a manager follows the work on the site, he cannot judge of the points that are troubling the workers unless he or his staff are in very intimate touch with them. Even this is not enough, since men often hesitate to bring up their troubles in the earlier stages; nothing is said until a minor trouble becomes a serious grievance. It is now widely recognised that the right way to prevent trouble is to set up official machinery under which it is the duty of representatives of the workers to meet the management for the very purpose of discussing the difficulties and troubles and obviating them in the early stages. Works Committees have been general in the engineering industry for over twenty years and are now strongly established on lines agreed

officially between the trade unions and the employers. Nobody doubts that they represent an important step towards closer co-operation and better output.

On small building sites contact is so intimate that there may be no need for a Works Committee. On larger building jobs, owing to their temporary nature, a Works Committee is even more important than in an old-established factory as a means of securing co-operation and good will.

In war-production industries, Works Committees have been generally supplemented by Production Committees, which are established for the purpose of helping the operatives not only to take an active interest in the work, but to share with the management responsibility for good and efficient production. These have grown rapidly in the last few years and have done valuable work in keeping the workers informed and interested.

Production Committees do not exist in the building industry; it is possible that it may be preferable to use the Works Committee for this purpose. Various firms in the industry have during the war taken active steps to keep their men informed and interested by informal meetings with the Works Committees, by addresses from members of the management, the architect or some visitor, perhaps from the Forces, and by such devices as wall newspapers. The Ministry of Supply has considered it worth while to establish a Works Relations Department, which has showrooms in London and the chief provincial centres, where all kinds of material of interest and inform the workers is on exhibition. It seems desirable that the Ministry of Works should take an active part in this organisation and carry on something of the kind in co-operation with the employers and operatives after the war.

EDUCATION

There is one thing which in the long run is likely to prove the most important of all in securing a good output from the operatives, and indeed from the industry as a whole, and that is improved education. This matter is fully dealt with in the recent report of the Education Committee of the Central Council of the Ministry of Works. That report recognises that the normal entry to the building industry should be through a junior technical school, and then a regular apprenticeship with one day a week at a senior technical school. The object of this education is not only to make good craftsmen, but to give them the passion for craftsmanship which will ensure good work. The Building Apprenticeship and Training Council has been appointed to deal with this matter and has already issued its first report.

The report of the Education Committee goes on to make recommendations as to the extension of higher technical education and of University education for members of the industry.

There is another aspect of education which is important and should be greatly developed. We may call it education for citizenship: to enable the craftsman to understand the part played by the building industry in the life of the nation. There is a fine opportunity for this kind of education now. This has been an engineers' war. Let us make it a builders' peace. Let us rely on the building industry during the next generation to rebuild Britain in such a way as to provide a pleasant and comfortable home in fine surroundings for every citizen. That is what the builders of Britain can do for us if the nation backs them and if they put their hearts into the work. That is the kind of thing that ought to be put before the boys in the technical school or after they have entered the building industry by their teachers, by employers, and above all by trade union leaders, not only as a fine ideal, but as a hard-headed and practical proposal.

CHAPTER VI

TECHNICAL PLANNING

IN 1940 THE Ministry of Works for the first time began to take an active interest in the efficiency of the building industry. Lord Reith brought in engineers and architects from private practice on a considerable scale. Sir Hugh Beaver, an eminent consulting engineer, with all the true engineer's passion for science and efficiency, was made Director-General. From that time the whole of the problems of the scientific efficiency of the industry began to be intensively studied by the technical staff of the Ministry, both for purposes of war and post-war building.

RESEARCH

Research in the building industry has in the past been inadequate; indeed, compared with the more scientific of our industries it has been almost negligible. This is partly because the building industry has been probably the most traditional and conservative of our great industries. As Kipling says in "A Truthful Song":

"I tell this tale which is strictly true,
Just by way of convincing you
How very little, since things were made,
Things have altered in the building trade."

There is one special difficulty, that building covers a large number of separate industries. To quote from the report to the Ministry of Works on Placing and Management of Contracts:

“New materials, new processes and new methods of construction have been developed in recent years and have come into practical use on a large scale. As a result specialist firms have come into existence and are now operating on a substantial scale under each of the following heads:

(a) Craft firms. Firms or departments of contracting firms which confine themselves entirely to one or other of the building crafts, such as plastering, plumbing, painting, masonry, joinery, tiling.

(b) Constructional firms. Firms which specialise in structural steel, reinforced concrete, floors, and similar structural portions of the building.

(c) Firms who specialise in the mechanical and other equipment of building, such as electricity, heating, ventilation, lifts, sanitary ware and similar work.

(d) Firms who specialise in decoration and other finishings, such as terrazzo, fibrous plaster work and mastic asphalt.”

It must also be recognised that the conditions of the building industry make research difficult. In 1942 there were 80,000 firms in the industry, employing on an average six workers each, varying from the ten largest firms, employing on an average 10,000 workers each, to 30,000 individual builders, employing no assistants at all. Even the largest firms have only quite small factories, such as joiners' shops or quarries. The conditions are such that serious large-scale research is very difficult and perhaps impossible for the individual firm of contractors.

As regards the industries providing the materials and fittings, these include the gas and electricity industries manufacturing apparatus for heating and cooking. Some of the firms in these industries are among the most efficient and research-minded in the country. On the other hand, of the industries providing materials and fittings exclusively for the building industry, few conduct any substantial amount of research, many of them doing none at all.

After the last war the Department of Scientific and Industrial Research (D.S.I.R.) founded the Building Research Station (B.R.S.). In most industries they founded Research Associations which were supported largely by subscriptions from the industry. In the case of building, the Government took over the whole

of the financial responsibility; just before the war it was providing funds to the extent of £70,000 per annum for the Research Station. The building industry and the whole of the subsidiary industries together provided about £20,000; most of this was contributed by individual firms in return for specific researches.

The B.R.S. has a small staff and is attempting to cover an immense field. It has done work of high quality and of considerable value in many directions. The Ministry of Works since 1940 has taken an active interest in the B.R.S. and has supported it in every way. Not the least value of the B.R.S. is that it has now an expert scientific staff with wide knowledge of many of the chief problems of industry. This staff has been of the greatest value in providing technical information for the study committees of the Ministry of Works, which are referred to below.

The annual turnover of the building industry is likely after the war to be at the rate of about £500 million per annum. It is now commonly held in America that an industry ought to spend 1% of its turnover on research; some of the more scientific industries in Britain are already doing more than this. This would mean an expenditure of £5 million a year on research in the building industry, including the subsidiary industries. In fact, it seems unlikely that the total research in all these industries amounts to a quarter of a million pounds per annum, and a substantial portion of this is paid by the Government. On American scientific standards the building industry ought to be spending on research twenty times as much as it is.

THE AVAILABILITY OF SCIENTIFIC DATA

The Ministry of Works found that existing knowledge in many fields related to the building industry was not readily available; indeed, such knowledge often existed only in the minds of individuals or in the archives of private firms. Lord Reith decided, therefore, as a first step towards strengthening the scientific side of the industry, to have reports prepared by a series of study committees, collecting together the available scientific knowledge in all the principal fields.

They found about seventy technical and trade committees already at work and many more projected; there was no co-ordination between them. The Ministry recognised twenty-three Study Committees covering a very wide field. The committees included, so far as possible, the best available representatives of all the interests affected in the study of each important aspect of the industry, with the double object of securing the best reports and the widest general acceptance of their recommenda-

tions. The committees were convened by different bodies, professional, industrial or Government; and the convening bodies took the main responsibility; but all agreed to co-operate with the Ministry of Works. For purposes of co-ordination the Ministry appointed a main committee, under the chairmanship of the Director-General of the Ministry; under this committee were three policy committees, dealing with design, structure and installations respectively, with distinguished architects and engineers as chairmen. The chart on page 51 shows the structure of the organisation and gives the subjects with which the different committees are dealing.

THE HOUSE-CONSTRUCTION COMMITTEE

The first of the Post-War Building Studies to be published is the report on House Construction. The Chairman was Sir George Burt, and the committee will be referred to as the Burt Committee. Its terms of reference were "To consider materials and methods of construction suitable for building houses and flats, having regard to efficiency, economy and speed of erection. . . ." The first report of the committee deals with alternative methods of house construction used in inter-war years.

Hitherto there have been no official criteria as to what constitutes a good house. The Burt Committee holds that the basic technical points are the following:

- i. Strength and stability.
- ii. Moisture penetration and condensation.
- iii. Thermal insulation.
- iv. Sound insulation.
- v. Fire hazard.
- vi. Maintenance and durability.
- vii. Vermin infestation.

And it proceeds to lay down standards as to what is desirable and possible under each of these heads at reasonable cost.

It concludes from its examination of the various new systems tested in the inter-war years that "Some are good; some embody good principles improperly applied; others cannot be recommended. The results of the Survey have, however, been encouraging. They disclose ready to hand different types of construction which, subject in some instances to modification in detail suggested by experience, provide good alternatives. Certain of the promoters already have under consideration improvements advised in the reports of the systems."

These conclusions are, of course, not final, but they are the

first serious attempt to define the qualities of a good house. It is particularly encouraging that certain promoters, stimulated by the work of the Burt Committee, are already taking advantage of its scientific analysis to make improvements in their designs. Every designer of a new construction of house in future will have at his disposal in the Burt Report a mass of reliable information which was not available in the inter-war years.

Even from this very short summary, it is clear how valuable the Burt Report is likely to be in the development of new methods of construction in the future.

THE HEATING AND VENTILATING COMMITTEE

Another good example of the work of the Study Committees is the Committee on Heating and Ventilating. In the inter-war period, when four million houses were built, there was a good deal of research by firms in the gas and electricity industries towards the production of better apparatus for heating and cooking. That was all to the good; but there was no independent research into the best methods of heating a house by gas, electricity or by various solid fuels so as to secure the maximum benefit for the householder, to prevent the pollution of the air by smoke, and to secure the greatest economy of fuel in the national interest. I personally approached several Ministers of Health to urge that this should be done. But the Government consistently refused to take any responsibility in the matter, or indeed any interest, with the exception of a small amount of research undertaken by the Fuel Research Station and the Building Research Station.

In 1941 the D.S.I.R. recognised the importance of the problem and appointed a group consisting largely of members of the staffs of the Building Research Station and the Fuel Research Station, under the chairmanship of Sir Alfred Egerton, Secretary of the Royal Society, to investigate the whole problem of the heating and ventilating of buildings, and particularly of houses.

Later on this group was absorbed in a larger committee including men of standing in the various industries concerned, as well as architects, engineers, housing experts and independent scientists, because it was felt that any recommendations would carry more weight if they had been considered and approved by so representative a committee.

The report of the committee deals with the fundamental scientific aspects of the problem:

The conditions most suitable for the comfort and health of the home-dweller.

The volume and kinds of heat needed to meet the conditions for space heating, cooking and hot water.

The efficiency of the different kinds of apparatus, using electricity, gas or solid fuel, for all these different purposes.

The main features of design of a house to secure healthy conditions and economy in fuel.

As deputy-chairman of the committee I have had an opportunity of studying the work at close quarters. There can be no doubt that the report provides basic information previously quite inaccessible as to the scientific knowledge available on all the aspects of the problem of heating and ventilating a working-class house.

Three further committees were appointed to consider the efficiency and design of the actual plant to be installed, one for electricity, one for gas, and one for solid fuel. These committees have carried the work of the Heating and Ventilating Committee a stage further towards practical results.

These reports will certainly be of the greatest help to the industries: manufacturers will study the reports and develop their apparatus accordingly; architects and engineers will find the reports of great value, both in designing their houses and in choosing the most efficient plant for installation. It may fairly be hoped that these reports will exercise a substantial influence both on the heating equipment and on houses themselves. Indeed, the preparation of the reports and the widespread discussions that have gone with them have already been effective in stimulating more active research and development by a large number of firms, though it will no doubt take a generation before the reports have their full effect.

STANDARDISATION

After research and the co-ordination of knowledge, the next step is the development of better plant and apparatus; this is entirely a matter for the industry. Then comes the problem of standardisation. This has been dealt with officially by the British Standards Institution, whose authority is generally recognised. So far as the building industry is concerned, there have been nothing like enough standards in the past, and this was the next step which the Ministry of Works decided to tackle.

During the war a good deal of standardisation was dealt with as a matter of urgency: for instance, the number of types of steel windows being manufactured and stocked was, by agreement between the Ministry and the manufacturers, reduced by 80%;

the number of types of baths has been cut down from forty to five, and so on. It was not always easy going; as an example of the toughness of tradition in the building industry, the efforts of the Ministry to standardise a single size of brick may be quoted. The Ministry found that the south of England preferred a brick of $2\frac{5}{8}$ inches; contractors in the north insisted on $2\frac{7}{8}$ inches, and the Scottish contractors demanded something over 3 inches. Each section insisted that their standard was the most efficient and that the cost of building would increase if they were forced to change it. Even a series of visits from the genial Parliamentary Secretary to the Ministry of Works, Mr. George Hicks, himself a bricklayer, failed to convince, and the three standards still prevail, causing unnecessary confusion and waste in the industry.

For the purpose of securing official standardisation in the building industry after the war, the Ministry set up a representative Standards Committee, which has issued its first report on the "Use of Standards in Building". The functions of this committee are to investigate all sections of the building industry, including particularly the reports of the Study Committees, and to suggest to the British Standards Institution suitable subjects for new British standards.

The committee has stated its objects as follows:

(a) *Consumer Requirements.*

To establish the minimum standards necessary

- i. To secure that building components are suitable for their purpose, have satisfactory appearance, appropriate length of life and provide efficiently for health, convenience and safety.
- ii. To secure that materials conform to known tests as to composition, and to any relevant physical, mechanical and chemical properties to ensure efficiency in use.
- iii. To form a basis for inspection, testing, comparison and grading of goods.

(b) *Producer Requirements.*

To establish the minimum standards necessary

- i. To secure economy in the use of materials, labour, machinery and tools.
- ii. To secure that building elements conform to recommended dimensional standards and types, permitting of interchangeability and ready replacement and of a reduction in the multiplicity of types and sizes.

The British Standards Institution has set up technical com-

mittees, and the drafting of British standards in accordance with the Committee's recommendations is proceeding.

CODES OF PRACTICE

A Codes of Practice Committee has also been set up and has already published two reports. It states that :

“Codes of building practice are sharply differentiated from building bye-laws such as those which compose the Ministry of Health model which do not purport to do more than set out in general terms the minimum requirements which can reasonably be enforced under penalty for safeguarding public health and/or securing similar objects and are legal rather than technical in nature.”

The objects of a comprehensive scheme of Codes of Practice for building are stated as follows :

“(a) To secure in the general public interest that buildings are suitable for their purpose, have satisfactory appearance, appropriate length of life, fit in with the communal provision of services and provide effectively for the health and safety of the users, the neighbours and the public ;

“(b) to secure in the general public interest that waste in the use of labour and materials is eliminated ;

“(c) to provide a basis for the correct use of materials (the best of materials may give rise to failure and disappointment if used in the wrong way) ;

“(d) to secure the proper use of new materials where there is not a sufficient basis of professional and craft experience in their use to ensure that they are suitably employed.”

The committee takes the view that, if it succeeds in fulfilling its functions, a code should :

“(i) confer on the designer a wide measure of freedom in selecting his materials and prescribing their treatment and use ;

“(ii) enable constructors to arrange their work in the certainty that they are carrying out the intentions of the designer and that the various operations can be properly and efficiently co-ordinated ;

“(iii) simplify the arrangements for the supply of materials in the proper sequence for the operations required ;

“(iv) ensure the most effective use of the work of craftsmen and operatives ;

COMMITTEE CHART

MINISTRY OF WORKS AND PLANNING
DIRECTORATE OF POST-WAR BUILDING

MAIN COMMITTEE

INSTALLATIONS POLICY COMMITTEE

STRUCTURE POLICY COMMITTEE

DESIGN POLICY COMMITTEE

- Lighting Committee
Convener D S I R
- Heating & Ventilation Committee
Convener D S I R
- Mechanical Installations Committee
Convener Inst Mechanical Engineers
- Electrical Installations Committee
Convener Inst Electrical Engineers
- Gas Installations Committee
Convener Inst Gas Engineers
- Solid Fuel Installations Committee
Convener British Coal Utilisation Research Association
- Plumbing Committee
Convener D S I R
- Plastics Committee
Convener British Plastics Federation
- Paint Committee
Convener Paint Research Assoc
- Non-Ferrous Metals Committee
Convener British Non Ferrous Metals Research Assoc

- Steel Structures Committee
Convener Inst Civil Engineers
- Reinforced Concrete Structure Committee
Convener Inst Structural Engineers
- Timber Structures Committee
Convener D S I R
- Walls, Floors & Roofs Committee
Convener R I B A
- Committee for Fire-Grading
Convener D S I R of Buildings

- Sub Committee on Design of Houses and Flats
Convener Ministry of Health
- Sub Committee on Design of Houses & Flats (Scotland)
Convener Dept Health for Scotland
- Committee on House Construction
Joint Conveners Ministry of Health, Dept Health for Scotland & MOWP
- School Planning Group
Convener Board of Education
- Business Buildings Committee
Convener R I B A
- Farm Buildings Committee
Convener Ministry of Agriculture
- Committee for the Architectural Use of Materials
Convener R I B A
- Acoustics Committee
Convener D S I R

BRITISH STANDARDS INSTITUTION
CODES OF PRACTICE COMMITTEE

STANDARDS COMMITTEE

PUBLICATIONS BOARD

“(v) safeguard the interests of both owner and occupier of the building.”

A few codes have already been issued in draft form for dwellings and schools. The first deals with sunlight and makes recommendations as to the size and orientation of windows in different kinds of rooms to allow sufficient direct sunlight to enter the room in winter. The second is on ventilation, and lays down rules as to the best methods of securing adequate ventilation in summer, when the windows are likely to be open, and in winter, when they are closed. The third and fourth deal with precautions against noise and fire.

No authoritative codes have existed in these matters hitherto. It is at once obvious how valuable they will be as a guide to architects, contractors and others. The appointment of the Codes of Practice Committee to produce step-by-step codes covering all the different aspects of the building industry is the beginning of a new development which should prove of great practical importance.

To sum up, the Ministry of Works has taken steps to put the building industry on a more scientific basis:

- (a) by setting forth in twenty-three authoritative reports what will be almost an encyclopædia of existing knowledge of the main aspects of the building and subsidiary industries;
- (b) by stimulating research;
- (c) by encouraging the development of new standards and codes of practice.

The Ministry is to be congratulated on a remarkable piece of Government initiative, which must in the long run have an important effect on the efficiency of the building industry.

CHAPTER VII

PRE-FABRICATION

THE WORD “PRE-FABRICATION”, as used in the building industry, means making articles or assembling units consisting of several articles in a factory instead of doing the work on the building site. The total cost of any building may be divided into pre-fabricated work, which is done in a factory, and site labour, which is the work carried out by the building operatives on the site.

Pre-fabrication may range from nothing up to nearly 100%. The hut in a native village, built perhaps of timber and mud and

reeds, has no pre-fabrication whatever ; often there are no factories available. The houses in a remote Swiss village are made completely of timber, some of which may have been sawn in a local saw-mill, if one exists; or there may be no factory work; the only pre-fabrication may be the nails.

Timber is the most adaptable of materials; successful pre-fabrication in the United States has been, as regards the shell of the house, achieved entirely with timber. It is understood that site labour has in some cases been cut down to about 5% of the total cost.

There has been a lot of loose talk about pre-fabrication. It is one of those unfortunate words about which the Press and the public tend to get excited and from which far too much is expected. There is a general belief in this country that pre-fabrication of the shells of houses has been a success in the United States. While it is true that a relatively small number of timber houses have been pre-fabricated to meet the demand for very rapid housing in connection with war buildings, the following extract from an important recent American book, "The Seven Myths of Housing", by Nathan Straus,¹ who was head of the United States Federal Housing Authority, is of interest.

"Practically every month during the four years that I was Administrator of the U.S.H.A., at least one new invention that we were assured would 'solve the housing problem' was brought to our attention. . . . Like the fountain of youth, the synthetic, portable, pre-fabricated house is always about to be discovered. . . . People like to believe that all the problems of slums and bad housing are about to be solved by the discovery of new methods of construction, generally described as 'pre-fabrication'. There seems to be little hope of coming to grips with housing problems as long as we continue to pursue this will-o'-the-wisp. . . . No belief is more unjustified, no misconception is the source of more confusion than the myth that an impending revolution in building techniques gives promise of enabling private enterprise to provide healthful housing within the means of the people who live in the slums."

At the same time, there is no doubt that pre-fabrication is exceedingly important. Labour on the building site is and must remain inefficient and slow; one of the most important methods of improving the efficiency of the industry is to carry the process of manufacture as far as possible in the factory and to leave as little as possible to be done on the site.

¹ Published by A. A. Knopf, New York, 1944.

The most inefficient thing about house-building is the erection of the house. The factor in which the building industry differs most from all other industries is the very large percentage of the cost of the building which is incurred in labour on the site. This labour must always be relatively inefficient, however good the supervision and however competent and hard working the individual craftsman.

The builder's contract must be carried out on the owner's site, wherever it happens to be, often far from the builder's headquarters, and generally in the open air. Most of the work is exposed to the weather; work is knocked off when it rains, and hitherto the worker has received no payment for "wet" time (time lost through inclement weather). This problem has been a sore point in the industry for many years, causing bad feeling and demoralisation.

Particularly in building small houses, almost everything is done by manual labour. There is little or no plant apart from scaffolding, wheelbarrows, etc. Transport is a very heavy cost; the men have to travel to the site wherever it may be, often long distances; transport of material on the job is, compared to factory conditions, archaic.

The handling of bricks in building houses is an extreme example of the impossibility of using modern methods. The bricks are generally taken from the lorry by one labourer and transported to where they are wanted by throwing them from man to man. The bricklayer stands on the scaffolding, which has to be constantly moved as the house gets higher and is only at the most convenient height for a small portion of the time. The labourer carries the bricks to him on a hod up a ladder. It is almost incredible to an engineer that methods so wasteful of human effort should be employed to-day.

Welfare facilities up to the standard that exists in a good modern factory—the provision of canteens, lavatories, first aid, facilities for games and for rest—are difficult to provide on a site which may be occupied for only a few weeks, and hardly ever for more than a few months.

Another difficulty is that the volume of orders on the books of any one firm fluctuates from time to time more violently than in most industries: a large contractor may employ 1,000 men at one time and only 100 a few months later. Further, since his contracts are likely to be in different parts of the country, it is impossible for him to keep permanently more than a nucleus of staff and of leading hands.

The average period of employment of a craftsman on a single site is estimated at only two or three months. The contractor has,

therefore, little opportunity for building up a loyal team of workers comparable with what can be done in a factory where work is regular.

Compared with factory conditions, having all the economics of efficient plant and machinery, of good supervision and favourable conditions of work and welfare, site labour on small buildings is and must always remain highly inefficient.

Lord Portal's famous pre-fabricated house has at the time of writing been on view for a few weeks. Having regard to the fact that there will be a desperate shortage of building-industry labour during the first two years after the war, Lord Portal set to work with great energy, and with all the prestige and resources of a Ministry behind him, to see what could be done to produce an almost fully pre-fabricated house, so as to be able to provide temporary housing of adequate quality during the emergency without calling, except to a minimum extent, on labour from the building industry. Lord Portal's house has led to widespread discussion and has already thrown considerable light on the possibilities of pre-fabrication for houses.

PRE-FABRICATION OF SHELL

There are two quite separate aspects of pre-fabrication: firstly, the shell of the house—that is, the walls and roof—and secondly, the interior of the house: the components, fittings and finishings.

As regards the shell, it has already been pointed out that the Burt Committee has laid down the following seven criteria for judging alternative methods of construction:

- i. Strength and stability.
- ii. Moisture penetration and condensation.
- iii. Thermal insulation.
- iv. Sound insulation.
- v. Fire hazard.
- vi. Maintenance and durability.
- vii. Vermin infestation.

The Committee has confined itself to technical criteria. The following non-technical points should be added:

- viii. Initial cost and cost of maintenance.
- ix. Speed of erection.
- x. Appearance.
- xi. Appeal to housing authorities and tenants.

In the first place, it is necessary to point out that Lord Portal's

house at present exists only as a prototype. Experience shows that it takes five years from the time a design is generally approved before an aeroplane can be regarded as entirely satisfactory and can be manufactured with real economy on mass-production lines. In some ways, a house is much simpler than an aeroplane; in others, it is perhaps more difficult to make a perfect house than a perfect aeroplane. Any conclusions regarding the Portal house, especially as to the cost at which it would ultimately be possible to build it, can at present be only very tentative.

As regards most of the eleven criteria of quality, the Portal house should come off pretty well. Durability and cost of maintenance are uncertain; neither of them is likely to be as good as the brick house. Appearance is considered bad by many people; but opinions differ. Sound insulation is bad; in fact, it is said that the house is "acoustically transparent".

The chief advantage of a pre-fabricated shell is rapidity of erection and the fact that no wet mortar is used and that the house is, therefore, dry and ready for occupation the moment it is erected.

The Burt Report describes a number of forms of walling for houses which are considered satisfactory, mainly steel or some form of concrete, all of which are pre-fabricated to different degrees. Experimental houses are being erected by the Ministry of Works to test the quality and cost of these various methods. Certain local authorities and private firms are also developing new types of house pre-fabricated to varying degrees. It is quite certain that the best combination of materials for the outer skin and inner lining of the walls of a house is not yet known.

Opinions of experts differ as to whether and when any of these new combinations are likely to meet more successfully the eleven tests of an efficient wall than the good old-fashioned brick house.

To sum up, it is fair to say that it is an open question whether any alternative form of walling is on the whole better and cheaper than a well-built brick wall.

PRE-FABRICATION OF COMPONENTS

The really important field for pre-fabrication is undoubtedly in connection with the components, fittings and finishings inside the house. Plumbing and joinery can certainly be done better and more cheaply in the factory. There is no advantage whatever in doing these jobs on the site, and this applies not only to the individual parts, but also to assemblies of parts, including the necessary plumbing and wiring.

The most dramatic and important example of a completely pre-

fabricated assembly is the famous kitchen-bathroom unit which has been installed in the Portal prototype house. The whole thing is built on a single base, with a wall dividing the kitchen from the bathroom. On the kitchen side are the sink, draining-board, cooker, refrigerator; on the bathroom side the bath and wash-basin. The copper for washing may be on one side or the other. Inside the hollow wall are the hot-water cylinder, the electric wiring, and all the piping for gas, water and drainage. The whole of this unit can be assembled in the factory and placed by a crane on the exact spot where it is to be built in. All that has to be done is to bolt it down and to make four connections: for gas, electricity, water and drainage.

The first assembly of this kind in the Portal house has been much criticised in detail and is, of course, susceptible of much improvement. But it is a magnificent beginning. It has demonstrated that the whole thing is practicable; and, if such a standard unit is adopted in post-war housing on a scale of from 200,000 to 400,000 units a year, if detailed improvements of the design are made as continually and as skilfully as they are made by a good firm in a new type of aeroplane, and if the mass manufacturing conditions are right, then it is a certainty that the unit will in the course of a few years become far more convenient for the housewife to use than anything that has hitherto existed, and at the same time incomparably cheaper.

The kitchen-bathroom unit probably offers greater advantages, for successful pre-fabrication and mass production, than any other unit. But all the fittings in a house are pre-fabricated. The problems are improvements in design, standardisation, accuracy of manufacture so as to fit easily together, the assembly of complete units in the factory, and the use of new materials. This side of the building industry is in a state of technical ferment. Experiment is almost in its infancy. Pressed steel is the main material used in the Portal house, and will certainly be an important factor. Stainless steel would be a splendid material for the sink if it could be made cheaply enough; light alloys will be used in many ways; there are possibilities in plastics, though not as great as is often supposed. The new resin-bonded plywood has excellent qualities of strength and resistance to fire and water.

CHAPTER VIII

MASS PRODUCTION

THE POSSIBILITIES OF economy and improved designs through pre-fabrication are great, but its main advantage as regards economy depends on the next stage: large-scale production. The major economies are possible only if the standardised parts are manufactured in sufficiently large numbers to secure the immense advantages of mass production.

Mass production on the largest scale was developed during the last generation in the motor-car industry, especially in America. The Rolls Royce was a mass-produced article in comparison with housing, but compared with the Ford V-8 the scale of Rolls Royce production was small. The Ford production was measured in hundreds of thousands per annum and was undoubtedly the finest and largest-scale example of mass production that the world has known. The result was that whereas the Rolls Royce cost perhaps £1,000, the Ford V-8 manufactured in America, where wages were two or three times as high as in England, was actually sold at less than £100. Making due allowance for the better performance of the Rolls Royce, it would appear that for an equivalent article the cost of the Ford was probably less than one-tenth of the cost of the Rolls. These figures are startling and are nothing more than an intelligent guess, but they can hardly be much exaggerated; in any case, there can be no doubt whatever that the very large numbers in which the Ford was produced, coupled with first-rate skill in organising production, did reduce its cost to a fraction of that of any car made only in thousands.

In this country, the beginnings of mass production which occurred in many industries in the inter-war period have been multiplied many times during the war in the production of weapons. A considerable number of firms have now practical experience and thoroughly understand what mass production means, and what immense economies can be effected by such methods.

The question we have to consider is how far mass-production methods are applicable to housing? How large a proportion of the shells (the walls and roof) on the one hand, and of the components on the other, can be effectively mass produced on a sufficiently large scale to ensure really low prices?

The guaranteed market is there. Four million houses are to be built in twelve years. Each year there will be a demand for millions of doors, windows and cupboards; for hundreds of

thousands of baths, plumbing units and heating units. The difficulties arise from the way in which orders for houses are placed. There were in the inter-war period thousands of speculative builders: some of them worked on a fairly large scale and placed some of their orders direct with manufacturers; smaller builders placed their orders through builders' merchants. About 1,500 local authorities placed orders for houses, some on a small scale, others building several thousand houses each year.

An important part was played by the builders' merchants, who purchase components and fittings on a relatively large scale, store them in different parts of the country, and deliver them to builders as required. The builders' merchants are essential to the work of the small builder, especially in connection with repairs, who wants to buy his articles on a small scale and even one by one, and who cannot deal direct with the manufacturer. Unfortunately it is to the advantage of the builders' merchant to sell articles of exclusive design wherever possible; this has a strong influence against standardisation and mass production. Builders' merchants are large and small, and though up to a point they place some fairly big orders, the net result of the whole system is that in very few of the subsidiary industries to the building industry was there anything approaching real mass production.

Most of those who placed orders had their own tastes and preferences for the different components of the house. Most of them employed architects who have a natural dislike of a standardised article and a tendency to want to design all kinds of things themselves. In short, conditions were the exact opposite of those under which the big motor-car manufacturer worked. He settles the design, standardises and mass-produces everything. The thousands of local authorities, individual purchasers of houses, architects, speculative builders and builders' merchants taken together form an ideal set-up for preventing standardisation or mass production.

Under these conditions it is not only that the goods cannot be cheaply produced; they cannot be cheaply sold. Hundreds of proprietary articles were manufactured; thousands of salesmen were employed to persuade owners and architects to purchase a particular article. It has been estimated that the cost of selling proprietary articles for use in houses by means of advertising and of visiting salesmen was often as much as 50% of the selling price. If an article such as a standardised mass-produced refrigerator could be supplied automatically to every house, then these selling costs could be eliminated. It is also estimated that if such articles could have been manufactured on a large scale the cost of production might have been halved. If these estimates are correct,

mass production, with the elimination of selling costs, would reduce the price of these goods to one-quarter of what it was. As an example, the normal refrigerator for a small house was sold for about £25 before the war, and could undoubtedly, by mass production and the elimination of sales cost, be delivered to the house for about £6.

THE PORTAL HOUSE

A very important step towards making mass production a practical possibility is the work that Lord Portal has done on his pre-fabricated house. He has announced that these houses are to be temporary, that they are to be built and owned by the Government. Further, he has announced that he hopes to build 2,000 a week during the first year. We may, therefore, reasonably assume that Lord Portal will be in a position to place orders for 100,000 of these houses, all fully standardised, and that the manufacturers will have prospects of further orders to follow. This would be enough to make it worth while for the firms concerned to spend substantial sums on jigs and tools, though it would not be possible to instal special plant during war-time. This is only a beginning, but it is a good one; it brings the whole question of mass production of houses and housing components right into practical politics.

MASS PRODUCTION IN PEACE-TIME

Unfortunately, from the point of view of securing the maximum economies of mass production, it is most unlikely that the Government will take responsibility for the placing of orders for complete houses in peace-time. The important question is, therefore, what steps are likely to be practicable after the war to secure mass production on the best and most economical lines of all the components and fittings which the building contractor has to order. The simplest method would probably be for the Ministry of Works to take full responsibility, either by placing orders itself for the mass production of articles or securing in other ways that mass production shall take place and that the goods shall be sold at the lowest practicable price.

The Government should undoubtedly make it a condition that wherever it gives subsidies for houses, Government-approved mass-produced articles should be included.

As regards non-subsidised houses, it may be hoped that the mass-produced articles would be so cheap and so good as to defy competition, and that in practice the speculative builder would automatically purchase them.

There are, however, serious objections to the undertaking of work of this sort by a Ministry in a democracy like ours:

(a) Ministers are usually selected for political reasons; the Minister of Works might have no experience of big business, he might know nothing about scientific methods; he would almost certainly be replaced by somebody else before he got to know his job.

(b) The regular civil service is by tradition and experience trained to control the actions of others. Its outlook and experience are not suitable for constructive and aggressive work.

(c) The system of parliamentary questions tends to penalise initiative; a Ministry is liable to be attacked for every small mistake if there is opposition to its work.

Effective mass production would mean confining orders to a limited number of efficient firms. Those who did not think they had got their fair share would do everything in their power to create trouble. Their Members of Parliament would bring all the pressure they could. They would ask detailed questions on all sorts of difficult points. The right to take up and magnify every mistake makes it almost impossible for a Ministry in peace-time to carry on the sort of big constructive jobs, which the Supply Ministries have dealt with so successfully in war-time. The system of parliamentary questions has its value, but it is one of the most efficient systems ever invented to destroy initiative and enterprise in the civil service and in Ministers.

The Minister of Works might deal with the whole matter in another way. He might try to organise large-scale purchase in various ways, perhaps by groups including local authorities, building societies, builders' merchants or contractors. An energetic and persuasive Minister, who devoted much time and thought to the matter, could achieve a good deal in this manner. But he could never hope to achieve anything approaching the full economies of mass production on such a basis.

A BUILDING REQUISITES BOARD

For these reasons, there is much to be said for removing this work from direct parliamentary control by giving the responsibility to a non-profit-making corporation, constituted on the same general lines as the Central Electricity Board. It might be called the National Building Requisites Board. It would be responsible to the Ministry of Works, but should have the maximum amount of independence that Parliament would allow. There should be a whole-time paid chairman, an experienced business man of the

highest standing, with a small Board. The Board should have full control over its own staff arrangements, which should not be on civil service lines. It should have no power to build houses, but would have the necessary powers and financial backing to enable it to ensure that all standardised parts of buildings should be provided of the best quality and design and at the lowest possible price.

In particular, it should be authorised to decide which standardised articles should be mass produced, and either to ensure that orders shall be placed by others so as to secure the advantages of mass production, or actually itself to place orders on such a scale as it may deem desirable, to hold stocks and to dispose of the products to builders.

It might be desirable for the Board to take over from the Ministry of Works responsibility for research¹ and development. We have already suggested that the building industry ought to spend a large sum on research. It is quite certain that in practice this will only happen if the money is raised by a compulsory levy.

I suggest that there should be a levy of $\frac{1}{2}\%$ on the cost of every building contract over, say, £100. This would raise at least two and a half million pounds per annum, which would be at the disposal of the Board for purposes of research and development, in the building industry itself and, of course, in all the industries making components. This would enable research and development work to be undertaken on what may be called an American scale.

Two and a half million pounds sounds a lot of money to levy on an industry, but if a Building Requisites Board were appointed on the lines I have suggested, if the right man was found as chairman and if the Board was given full authority and two and a half million pounds a year to spend, then one can say quite dogmatically that it would revolutionise the quality, design and cost of many of the components in a house. Nobody can do more than guess as to the possible economies. But it cannot be doubted that it would save not $\frac{1}{2}\%$ of the cost of building, but something more like 10% or 20%. Indeed, if effectively carried out over a period of years, the saving should be substantially bigger than this.

My guess as to what might be possible after the Building Requisites Board was set up and given the powers which have been suggested is that it might be possible within five years to save £100 on the standard house as recommended by the Dudley Committee.² These savings should be applicable to all new houses, so that on

¹ The Building Research Station would, of course, remain under the Department of Scientific and Industrial Research.

² "Design of Dwellings."

four million houses the saving would be no less than £400 million. If costs settle down at 30% above 1939 prices, then at 1939 efficiency the Dudley house would cost, inclusive of land, £700. The economies due to mass production, amounting to £100 per house, might bring it down to £600.

CHAPTER IX

MINISTRY OF WORKS¹

I HAVE DESCRIBED in the preceding chapters the two aspects, administrative and technical, of the new task of controlling the building industry which the Ministry of Works has undertaken during the war. Administratively, the Ministry has had to try to ensure that the necessary labour and materials should be available in the proper order of priority for the jobs which the Government considered important, that no unnecessary work should be undertaken, that scarce materials should be economised to the maximum extent, and that the whole of the work should be carried out as quickly and as cheaply as possible. Technically, the Ministry has laid important foundations for the improvement of the industry through the encouragement of research, and through the work of departments and committees on Standards and Codes of Practice, and of the twenty-three Study Committees.

After the war the greatest task of the Ministry will be to control the building industry and its subsidiary industries by means of the triple plan: the man-power plan, the building plan, and the materials plan. This will be a task of first-rate national importance. It will be most important and most difficult in the emergency years immediately after the Armistice, but will continue to be important and difficult for a long period. The control of building by licensing in times of threatened boom will be *politically* difficult; the promotion of public works in times of threatened slump on an adequate scale and at the right time will certainly be a task of great *technical* difficulty. The White Paper on Employment Policy has shown how difficult it will be to combine an effectively timed system of public works with the freedom

¹ After the war the Ministry of Works will no doubt be responsible, as it was before the war, for erecting many Government buildings, and it is important that it should, as in the past, set a national example of good building. It may be desirable to extend the building responsibilities of the Ministry to build houses in areas where the local authorities are not able to tackle the work effectively. But this aspect of the work of the Ministry is not relevant to the purposes of this book, and I propose therefore not to deal with it.

of private enterprise to build, or not to build, when and where it likes.

The other vital administrative task of the Ministry will be to ensure that all the necessary materials and component parts shall be available in sufficient quantities and at reasonable prices. This in itself, particularly in these days of increasing strength of trade associations, is likely to prove a task of great importance and great political difficulty.

Technical control after the war will be equally important and difficult. The Ministry should certainly continue its efforts to ensure the widest possible expansion of research, development and standardisation in the industries concerned. This part of the technical task should be relatively easy; the difficult problem is to ensure that the full advantages of pre-fabrication, mass production and mass sales are secured.

THE ORGANISATION OF THE MINISTRY

For this work the Ministry has had two advantages: it is small in comparison with other Ministries, and it has been non-political. The only other single-industry Ministries are the Ministry of Agriculture and the Ministry of Fuel and Power. Both of them are highly political, they have been constantly attacked in Parliament by very strong interests, and the Minister has been forced to give a great deal of his attention to political problems. The Ministry of Works has been fortunate in that it has not come up against any strong political interests, and Parliament has therefore left the Ministry alone. Further, the Minister has been a member of the House of Lords and has not had to spend much of his time in Parliament.

Most Ministers are hopelessly overloaded. They have to deal with their constituencies, they have to spend much time in Parliament, they have to read endless Cabinet papers. Unless they are men of unusual vigour and ability, they have no reserve energy left to deal with more than the urgent problems of their Ministries. They have little, if any, time for long-range thinking or planning.

The technical work done in the Ministry of Works during the war, and the relative freedom of the Minister, have provided the background which has enabled Lord Portal to produce his pre-fabricated house at short notice. It is believed that he has been able to give so much of his time to this task that, on the analogy of a limited company, he has acted not only as chairman, but almost as managing director. I believe it to be an instance of Government initiative and enterprise without parallel as regards peace-time activities. For the same reasons, the Minister should

be able to give the necessary time and attention to carry through successfully, after the war, the very difficult problems of administrative control of the building industry and the many other industries which supply its needs.

As regards the control of design and production, it is of the first importance to the whole national building programme that the Ministry of Works should take the necessary steps to ensure that mass production and mass sales of the components of a house shall take place on the largest possible scale. This may be done either directly by the Ministry of Works or by a Building Requisites Board.

This task, if carried out by the Ministry, is likely to present very serious difficulties. It will involve a staff including engineers and administrators brought up in the habits of initiative and responsibility, and with the different kinds of technical knowledge required. And, above all, these functions will require a Minister who is a leader, a man of experience of great affairs, conspicuous for energy and political courage and with time to think and plan. Only an exceptional Minister, subject to the barrage of parliamentary questions and the pressures which the introduction of effective mass production in the building industry would involve, could make a success of the job. Indeed, the pressure to give what the local M.P. considered a fair share of orders to firms in his constituency would probably be so strong as to make full efficiency impossible.

If, on the other hand, a Building Requisites Board should be set up and given full responsibility for this side of the work, then the Minister would be relieved of all the details of the business and would be able to devote the whole of his time and energy to the appointment of the Board, to giving it his constant encouragement and support, and to the larger matters of policy.

Even if a Building Requisites Board should be set up under a chairman of outstanding experience, reputation and ability, it is doubtful how far Parliament would allow the Board the necessary freedom for full efficiency. But the chances of success would almost certainly be greater than if the work were carried out directly by the Minister of Works.

If the Government's plans for the expansion of the building industry become effective, the industry will, after about four years, employ one and a quarter million workers directly and another one and a quarter million indirectly, or a total of no less than two and a half million. The whole success of the physical reconstruction of Britain depends on the efficiency of the industry. My analysis makes it clear that it is quite impossible for the industry to function effectively unless the Government provides the

right economic background and controls the industry itself and its subsidiary industries in all kinds of ways, both administrative and technical. The Government, which alone can see the problem as a whole, can alone provide the conditions of success, by using its powers of legislation, direction and persuasion, and by ensuring that the necessary finances are available, both to pay for the buildings and to pay for research and development. A strong Ministry of Works, actively supported by the Cabinet, is vital to the successful Rebuilding of Britain.

PART II

HOUSING

CHAPTER X

BEFORE WORLD WAR I

WE HAVE TO-DAY in Britain many slums of which we are thoroughly ashamed. We succeeded in clearing away a few before World War II began, but we still have far too many. As an example, let me quote from a recent report of the Scottish Board of Health:

“Damp was present everywhere, the walls and ceilings of a large number of houses being literally soaking. Everywhere we noticed an almost total lack of sanitation, conveniences being few and for the most part being out of repair, and even in some cases leaking downstairs and even into the houses. Practically every property inspected was absolutely bug-ridden. The food itself will not keep owing to the damp and verminous conditions of the holes in the walls in which it is kept. . . . In addition to the insects I mentioned, we found evidences of a perfect menagerie of animal life, including lice, rats in great numbers, mice, cockroaches, snails, and even toads. Can it be wondered that such places breed an unhealthy and discontented population?”

The worst slums in my own city of Manchester are little better. The Medical Officer of Health has officially condemned 68,000 houses—over one-third of the total—as being unfit for human habitation.

How did these slums come into being? Why do they still exist? What are the standards we must achieve? How can we build a good home for every family at a rent it can afford, in pleasant surroundings, where the father can easily get to his factory and to the public-house, the mother to shop, school and clinic, and the whole family to parks, playing-fields, libraries and places of amusement? And how soon can this be done?

These are the questions I want to try to answer. Let me begin by examining shortly the history of housing before World War I. It may be divided into three stages.

STAGE I. 1800-1830: THE BUILDING OF THE SLUMS

The slums began to be built about the beginning of the nineteenth century. There was then a tremendous industrial expansion. We were the first people in the world to start making things cheaply and in large quantities with the help of steam-power and machinery. Our industrialists were in a state of great exhilaration; they felt they were rendering wonderful services to mankind. They built their factories and made their profits, with never a thought about where the workers lived. This callous disregard of the lives of others was made morally easy because the economists had invented the theory of *laissez-faire*. Every man must rely on himself; the enlightened self-interest of each would work harmoniously for the welfare of all. The only way to benefit the workers was to provide cheap goods and to make profits.

So we had the first stage of industrial housing, which lasted for more than a generation. The building of houses was left, without any kind of public control, to men who went into the business with the single object of making a profit, genuinely convinced that by so doing they were rendering their best service to their fellow-men. Wages were low, so rents had to be low and houses had to be correspondingly cheap. The houses were mere brick boxes; there was no drainage and no proper water supply. Not only were the houses themselves unbelievably bad, but, as is shown by the following quotation from Friedrich Engels, the cramming of the people into attics and undrained cellars was even worse.

"The cottages are old, dirty, and of the smallest sort, the streets uneven, fallen into ruts and in part without drains or pavements. . . . What must one think when he hears that in each of these pens, containing at most two rooms, a garret and perhaps a cellar, on the average twenty human beings live; that in the whole region, for each 120 persons, one usually inaccessible privy is provided."

STAGE II. 1830-1865: SANITARY REFORM BEGINS

It was a new departure to crowd together great numbers of houses full of human beings, and the result was what we now know to have been inevitable: contagious diseases found fertile soil in which to flourish. Violent epidemics broke out in the thirties, and spread from the slums to the better parts of the cities. The Government was forced to take action, and concluded that the only protection was the provision of good drains and a pure water supply. A successful beginning was made, and the

environment of the houses was steadily improved. Epidemics were largely reduced. England began to learn the lesson that enlightened self-interest and the motive of profit would not prevent disease, and that healthy conditions of living depend on wise and far-reaching action by public health authorities, spending substantial amounts of public money for the general good. This improvement of public sanitation constituted the second stage in our housing history.

But although the environment was improved, the building of new houses was still left to private enterprise with almost no control. During this period official reports on housing began to appear. The Health of Towns Committee, 1840, reported as follows:

"An individual who may have a couple of thousand pounds . . . wishes to lay it out so as to pay him the best percentage in money; he will purchase a plot of ground; then what he thinks about is, to place as many houses on this plot of ground as he possibly can, without reference to drainage or anything, except that which will pay him a good percentage for his money."

The results of this type of private enterprise are dealt with in the Report of the Committee on the Sanitary Condition of the Labouring Population, 1842:

"The walls are only half-brick thick, and the whole of the materials are slight and unfit for the purpose. . . . They are built back-to-back; without ventilation or drainage; and, like a honeycomb, every particle of space is occupied. Double rows of these houses form courts, with, perhaps, a pump at one end and a privy at the other, common to the occupants of about twenty houses."

The whole problem of public health was taken up during this period by public-spirited reformers, few in number but vigorous in action. They played their part in accelerating sanitary reform, though the main driving force was still cholera rather than the public conscience. They did much to prepare the way for the third stage in housing reform, which lasted from about 1865 until 1914.

STAGE III. 1865-1914: HOUSING REFORM BEGINS

During this period the social conscience grew steadily stronger. There was a Royal Commission on Housing, Parliament produced several Acts both about sanitary reform and housing, local

authorities appointed Medical Officers of Health and passed building bye-laws.

Sanitary reform continued with increasing vigour and with improving standards throughout the period. The chief things were the provision of good drainage and of a supply of pure water laid on to every house.

There was a good deal of reconditioning of old slum houses, in which Manchester led the way. Cellar dwellings were closed, a proportion of the houses pulled down to let in light and air to the others, water laid on to the old houses, and modern water-closets replaced the foul privies. Good results were achieved; cholera, typhus and other epidemics were abolished, and the cities became slowly but surely less unhealthy.

At the same time, the public and the Government began for the first time to take a real interest in improving the quality of the new houses that were being built. This was done mainly by means of building bye-laws, which were passed by local authorities all over the country, insisting on good construction of the houses themselves and on space round the houses to ensure light and air. By 1914 the houses that were being built were all of a reasonably healthy type.

Unfortunately, however, as the houses were made better they became correspondingly more expensive. Every step to insist by law on higher minimum standards involved an increase in cost, and therefore in rent. The result was that houses within the means of the lower-paid worker who had a family of children ceased to be built. The poor large families were all forced to remain in the old slums, and since these were steadily deteriorating as the result of age, there is little doubt that the conditions in which many of the children of the poor were forced to live were actually becoming worse.

CONCLUSION

This sketch of the history of housing in the nineteenth century, brief as it is, is sufficient to justify us in drawing two definite and important conclusions which can hardly be disputed.

1. *Standards of housing for the workers depend entirely on public control.* Some builders will always be found ready to build shoddy and insanitary houses if they can be let or sold at a profit, unless it is made illegal to do so. To ensure good housing, public control must be compulsory and must lay down minimum standards covering the design, the construction and the surroundings of the house.

2. *The housing of the poor is fundamentally a problem of poverty.* When standards for new houses are raised, the houses invariably

cost more, rents are higher, and unless wages are increased at the same time, a larger number of the poorer families become unable to afford the economic rent of a new house.

CHAPTER XI

THE INTER-WAR PERIOD

THE HISTORY OF housing in the inter-war period is full of interest. It is complicated and difficult to follow in detail; Parliament was constantly discussing housing problems, there were no less than five major Acts of Parliament all granting housing subsidies on different terms. I shall attempt to deal only with those aspects¹ of inter-war experience from which we can learn lessons likely to be of value after World War II.

STANDARDS OF HOUSING

One of the most important advances made in the inter-war period was the adoption by the Government of an entirely new standard of working-class housing, as recommended in the epoch-making Tudor Walters Report, published in 1918. It was a standard which had not even been dreamt of in pre-war days. It recommended that the houses should be built not more than twelve to the acre, each standing in its own garden, in a well-planned estate. The house most generally built, which we call the inter-war standard house, has a floor area of about 750 sq. ft., and is usually found in blocks of two or four. A typical house includes a good living-room with a sunny aspect, a small but well-fitted kitchen, three bedrooms, a bathroom, a water-closet approached under cover, a store for coal, room for bicycle and pram, and a ventilated larder of reasonable size.

Four million houses were built in the inter-war period up to or near the Tudor Walters standard; we have now got so used to this type of house that many of us have forgotten what a wonderful advance it represents. The contrast between the hovel of a hundred years ago, immense numbers of which still exist in the slums, or even between the dull rows of houses built in the suburbs in the first decade of the nineteenth century, and the Tudor Walters cottage on a well-planned estate, must be seen to be believed. All the requirements of a full and healthy family life are met in a standard inter-war house, on the one condition that it is not overcrowded.

¹ For the rate of building, see Tables III and IV (p. 255), and Fig. III (p. 84).

There is, of course, room for improvement; this will be discussed in a later chapter. But, broadly speaking, I am bold enough to say that as a result of a hundred years of steady evolution, we have now arrived at a house which provides nearly everything that is essential for a civilised family life, and that something like the Tudor Walters house may for practical purposes be regarded as a permanent standard. When we succeed in housing every family in a house of the Tudor Walters standard we shall be able to feel satisfied, and indeed proud, of a great achievement.

GARDENS

Over 90% of the inter-war houses were built on suburban estates at about twelve to the acre. The greatest advantages of this scattered development were, firstly, the light and air which each house enjoyed, and secondly, the fact that every house had a good garden.

We made nearly four million gardens in twenty years; one-third of the fathers of Britain to-day spend many healthy hours each week in their gardens. I have seen thousands of these gardens, and nearly all of them are well kept. I remember particularly one case of a man who had moved out from the slums; four years before he had never had a spade in his hand. His garden was well laid out, well worked and beautifully kept; it was a blaze of glorious colour. It meant a great deal in that man's life. Most of the tenants grow flowers in the front, and vegetables in the back garden, often with much success. Some of the more enterprising put up a small greenhouse and grow tomatoes under glass, selling their surplus to their neighbours, to their mutual benefit. To be able to do such healthy and creative work as gardening in these days of passive amusements is a boon to the men moved out from the slums. But the chief value of the garden is undoubtedly as the place for the perambulator and for the small children to play where the mother can overlook them while at work in the house, and as a place for the parents to sit in privacy and peace. The provision of these four million gardens represents an important advance in civilisation.

PRIVATE ENTERPRISE

Till 1914 practically all house-building was done by private enterprise. During the inter-war period local authorities built considerable numbers of houses and there was constant controversy as to the respective parts of private enterprise and of public building.

The phrase "private enterprise" is often loosely used to mean two separate things. The first is building by a contractor to the order of an owner, who may be a private person or a public authority. In this sense private enterprise did all the house-building before 1914 and during the inter-war years, except the insignificant number of houses built by local authorities by direct labour. There can be no reasonable doubt that private enterprise will in this sense continue to build practically the whole of the houses in the post-war period.

THE SPECULATIVE BUILDER

The other form of private enterprise is that carried out by the speculative builder who combines two normally separate functions: that of the builder who erects the house, and that of the owner who decides what sort of house shall be built and places the order with the builder. The speculative builder buys an estate, develops it, builds houses on it, and sells them one by one to owner-occupiers as soon as he can get what he considers a fair price. If he builds well and has good judgment in the development of his estate, he makes a double profit, one as a builder and the other as a speculator. The latter is said to be often bigger than the former.

When the development is on a larger scale, the usual procedure is for an estate developer to buy a number of fields, to put in the roads and sewers, to arrange for the placing of public services, and then to curb, channel and roughly finish the roads. He then sells eligible building sites to the small speculative builders. It was often the estate developer who did best out of the whole transaction; he would charge the small builder a full price for the land which he bought or leased; and at the end the estate developer would have in hand extremely valuable sites for shops, public-houses, cinemas, etc. An experienced builder writes as follows:

"This system sometimes worked very badly and sometimes worked very well, according to the character of the estate developer. If he were a public-spirited man who felt that he owed a duty to the community to ensure proper development on his estate he would see to it that the builders who bought or leased land from him did their job well. If on the other hand he were merely out for the profit (and there were many such developers), then as long as he sold his land he did not care a rap what sort of houses were put up. In my experience the worst cases of jerry-building occurred on estates of this kind

where you got a combination of conscienceless developer and small builder."

A question of great importance for post-war building is the part which should be played in it by the speculative builder, and I therefore propose to consider in some detail the experience of the work of the speculative builder and of local authorities respectively in house-building during the inter-war period.

Quality.

There has been much controversy about the quality of the house built by the speculative builder, both as regards the lay-out of the estate, the design of the house and the quality of the actual building.

The speculative builder at his best is very good indeed. I had an opportunity recently of visiting some fine housing estates in the company of the head of a leading firm. The houses are of pleasant and varied design, the estates are well planned, the streets well laid out, tastefully planted with trees and bushes, and with occasional open spaces. The prices of the houses built in the inter-war days varied from £600 to £1,200.

The builder has a competent technical staff under a head architect, who worked for him throughout the inter-war period. He was constantly at work experimenting, developing and improving the types of house. From time to time he called in experienced outside architects to design a portion of an estate, in order to prevent his staff from getting into a rut and to give them new ideas. Whenever technical problems arose he got into touch with the Building Research Station or the Forest Products Research Station. Every year he had built a house at the Olympic Exhibition; he planned it a long time ahead, built a prototype on one of his estates, then built a second one on better lines, and finally the third was built at Olympia.

He takes the view that speculative builder houses are likely to be better designed from the point of view of the housewife and the occupier than those of a local authority, because the speculative builder *must* sell every house as he builds it at a fair price, and he can only do this if he is constantly studying the demands of the owner-occupier. The architect of the local authority on the other hand has known all through the inter-war period that there would be no difficulty in letting all the houses he could build, and he has, therefore, been in a position, to a considerable extent, to design the house according to his own views and in particular to lay a lot of stress on the external appearance.

He gave two examples of the difference in his houses and in those of neighbouring local authorities. In the first place he found that the housewife wanted to be on a road with through traffic so as to have something to watch and to be interested in. Houses on cul-de-sacs were hard to sell and he had entirely abandoned the cul-de-sac layout. The local authority, on the other hand, on the theoretical view that cul-de-sacs are quiet and safe for children, continued to build them.

The second difference was as regards windows. He made the window area equal to one-sixth of the floor area, and brought the glass down within 2 ft. of the floor on the ground floor. This gives a light room with pleasant views. On the other hand, the large area of glass spoils the appearance of the house from outside. The local authority, therefore, makes the windows smaller, equal to about one-tenth of the floor area, and raises the level of the bottom of the glass to about 3 ft. above the floor, so making the houses more attractive from the point of view of external appearance and less attractive to the occupier.

I was greatly impressed both with the business methods and with the enthusiasm and vision of this builder. He was building fair-sized houses in a good district and he had the imagination, as well as the ability and the necessary capital, to build really good houses and at the same time to make a profit. He took a great pride in his work and in the service he was rendering on a considerable scale to the district.

Baldwin Hills.

The most striking example of a fine and imaginative housing estate that I have seen developed by private enterprise is the estate of Baldwin Hills in the city of Los Angeles. It was promoted, after much research, by a group of architects who purchased a rectangular block of 100 acres of flat land, on which they planned and built 600 houses. There are no roads on the estate except short cul-de-sacs for garages and to enable tradesmen to get close to the houses. The backs of the houses are turned to the outer roads, the fronts face spacious lawns and gardens in the interior of the estate. These are beautifully kept by a team of twenty-seven gardeners. Maids and cleaners are available to the tenants on hire and the children are taken by bus to their schools.

There is a pleasant clubhouse; the tenants are carefully selected to make a harmonious community. I visited several of the houses; two of the mothers used the same phrase: "This

house is my heaven". One of them said that she and her sons were so happy there that they never wanted to go out.

Baldwin Hills struck me as a brilliant piece of private enterprise; there is nothing quite like it in Britain. Let us hope that similar enterprise may be shown in this country after the war.

I have dealt so far with the best examples of the speculative builder's work. Unfortunately these are the exceptions. It is only a few large firms that did such high-class work.

Private enterprise building during the inter-war years was done by firms of all sizes, from the small speculative builder, often a craftsman who worked himself with half a dozen or a dozen others, up to the big firm which purchased and developed estates including hundreds of houses.

The first essential for a speculative builder is to make a profit—otherwise he goes out of business. Unfortunately, the easiest way to make a profit is to build houses that look as if they were well built but to use cheap and shoddy materials and methods. So long as the houses conform to the local bye-laws, which do not touch at all most of the questions of quality, the only control of quality is the judgment of the purchaser. He is as a rule quite incompetent to judge the quality of the building, and in any case he only sees the building when it is finished. At that stage even the expert cannot judge whether good workmanship and good materials have been used all through.

The only inspection that is of real value in a building is the inspection by an experienced architect or clerk of works while the work proceeds. This inspection is only carried out if the owner arranges for it, but in the case of the speculative builder he is himself, during the erection of the building, the owner as well as being the builder, and if he wishes to do the cheapest possible job there is nobody to stop him, nor can anybody find out what he is doing.

One speculative builder who had built large numbers of houses throughout the inter-war period told me that he began by building high-quality houses which he did not succeed in selling at a profit. He learned his lesson, and in future he built on each estate some high-quality houses and some lower-quality houses. The difference amounted to about 1s. 6d. a week in the rent; the builder was quite certain that after a few years the extra cost of repairs would more than make up the difference in the rent. He did everything he could to induce purchasers to buy the more expensive houses, but in fact 90% of them always took the cheaper house, which looked very much the same as the other.

The type of speculative builder who is out for the maximum

immediate profit is, therefore, constantly looking for the opportunity to cheapen the house by using shoddy materials or by driving labour so that the work is scamped, subject always to complying as far as he must with the bye-laws and to giving a sufficiently good appearance to the finished house to make the prospective purchaser believe that he is buying a good-quality article. Every penny the jerry-builder saves in this way goes straight into his own pocket. Everybody knows how much damage the worst type of jerry-builder did to the reputation of the building industry. The existence of even a small proportion of such builders is a national misfortune; in spite of much discussion nothing effective was done to prevent a continuation of these practices during the inter-war period.

The mass of speculative builders' houses were of fairly good quality. They were controlled by bye-laws and by town-planning regulations in various ways; they were also controlled by the necessity of appearing to be better than municipal houses. The owner-occupier regards himself as being of a higher social class than the municipal tenant and expects his house correspondingly to be, or at least to appear to be, a better house. Generally speaking, speculative builders achieved this by more substantial garden walls and by the use of such devices as gables and stained-glass windows, even though the house might be much worse built than the local authority house with its plainer exterior.

The estates as a rule are dull and unimaginative; it did not pay to spend money on good architects and planners, indeed the small speculative builder almost invariably purchased a design for a pair of houses and repeated the same design so long as he could find customers.

The speculative builder can only build under suitable conditions, that is to say, where he is confident that he will be able to sell his houses at a profit. For instance, in the boom of 1920 there was no speculative building because the cost of building was so high the builder had no confidence in finding purchasers at a profit. Conditions gradually improved, but it was not till about 1930 that they became really stable, so that the builder felt confident that he could invest money on a substantial scale in house-building and that there would be a reliable market for the houses at a reasonable profit.

In general, the more expensive houses are the most profitable; those built in the earlier days cost from £600 to, say, £1,200 each. Gradually the market for the more expensive houses became saturated in most parts of the country, and towards the end of the inter-war period speculative builders were selling houses down to £500 and even £400. In the earlier years all the

houses had been for sale, but as the market for houses to sell became saturated, builders in many parts of the country started building houses to let.

THE BUILDING SOCIETIES

The great bulk of the houses built by speculative builders were financed by loans from the building societies. Building societies are interesting and important bodies. They are in effect banks which specialise in lending money to enable any individual to become a house-owner. The prospective owner must deposit from 10% to 25% of the purchase money. The building society lends him the remainder. As its security it takes a mortgage on the property coupled with the borrower's promise to repay, and in certain cases with a guarantee from an insurance company or local authority. The purchaser repays the money by monthly or weekly payments to the building society (roughly equivalent to rent). These cover interest and sinking fund, so that the house becomes the borrower's unencumbered property in about twenty years. This system was found to meet the needs of the public admirably in the inter-war period. The building societies¹ gained the full confidence of the investing public, and their methods were understood and appreciated by persons who wished to purchase houses.

The combination of speculative builder and building society worked in such a way as to make everything easy for the intending buyer. He could inspect houses on a speculative builder's estate and decide what type he wanted to buy or to have built for him. He could then arrange, with the help of a building society, to purchase a house costing, say, £500 by paying down a lump sum of £50 and then a weekly payment of perhaps £1 for twenty years, which covered rent and sinking fund and made him immediately the owner of the house with full rights over it so long as he continued his weekly payments. In fact, the experience of building societies was that instead of taking twenty years to pay for the cost of a house, the average owner-occupier made additional payments which enabled him to complete the purchase in a period of about seven years. Arrange-

¹ At the end of 1943 the building societies had assets of £769 million. They varied in size from very large to very small. The largest had assets of £129 million. Four hundred were members of the Building Societies Association, which is the central organisation of these societies. These 400 societies had assets exceeding £735 million. There were about 500 societies, mainly small, aggregating total assets of £34 million who were not members of the Association. Some ninety-five societies each had assets exceeding £1 million, and these controlled about £650 million of assets.

ments were also made under which it was reasonably easy for the owner-occupier to dispose of his house on fair terms if it was necessary for him to move.

This system gave the owner-occupier all the advantages of ownership for a charge of only a few shillings a week more than he would have had to pay as rent; in fact, it came very near to combining the advantages of ownership and of tenancy. In addition to this, there was the attraction of the superior social status of house ownership, and on the other hand there was an acute shortage of houses to let, municipal houses being rarely available for those who could afford to purchase a house. There is no doubt that private enterprise working through the building societies and through the speculative builder has invented an admirable means of building and selling houses to suit the convenience of the middle-income classes.

Table IV (p. 255) shows the remarkable increase in the number of houses built by private enterprise in successive periods of five years. During the last quinquennium of the inter-war period speculative builders erected on an average no less than 272,000 houses each year; three times as many as were built during the same period by local authorities. The speculative builder rose to the occasion and succeeded in producing houses on a very large scale to meet a quite abnormal demand.

There have been several studies of the reasons for the prolonged housing boom during the thirties. Among other factors, there was a very serious shortage of houses, especially to let, at the beginning of the period; building prices were relatively low compared to incomes, as were the prices of food and other necessaries; the new design of house was in all kinds of ways more attractive to the modern mind than the old houses, both from the point of view of labour-saving and because it had a good garden. As a result of all this, millions of persons had sufficient margin of income and sufficient confidence in the stability of values to be able and willing to purchase their houses. What the prospects of a similar demand are likely to be after the war is a problem of great interest and difficulty.

BUILDING BY LOCAL AUTHORITIES

After the Armistice there was an almost desperate shortage of houses, and prices were so high that the speculative builder could not run the risk of building at all. Public opinion was fully aroused, and in order to get something done the Government took two important, indeed revolutionary, decisions. Firstly, it made the local authorities responsible for meeting the housing

needs of their districts, and secondly, it granted large subsidies to local authorities to enable them to let good houses at rents within the means of the workers.

This brought local authorities for the first time into the field as builders of houses. I was at the time Chairman of the Manchester Housing Committee, and have a vivid recollection of the great expectations that were formed as to what we ought to do and of the immense difficulties we encountered. We had no experience and no staff. We had to learn our job from the beginning; opinion as to the desirability of municipal building was divided among the members of the Council, so that we could not rely on whole-hearted support, and finally there was almost no skilled building labour. Progress was, therefore, necessarily slow.

Local authorities all over the country appointed technical and administrative staffs under a housing director who was generally an architect; they purchased sites, prepared their layouts all in a great hurry, and then proceeded to let contracts on the usual competitive basis to builders.

In Manchester and several other towns direct labour departments were started and proved valuable mainly in checking the prices of contractors. They were always on a small scale and there is no likelihood that they will increase. The great mass of local authority building has been and will in future almost certainly be carried out by private contractors.

Generally speaking, the houses built by local authorities were well planned, well built and were let at reasonable rents. The estate planning was only fair. They were built twelve to the acre on the lines recommended by the Tudor Walters Report, but were not adequately planned in relation to the needs of the residents as a community. Towards the end of the inter-war period planning was improved; the satellite garden town of Wythenshawe built by Manchester is an example of good community planning.

From 1930 onwards local authority activities were largely directed to the clearance of slums and the rehousing of the displaced slum-dwellers in new estates under the Greenwood Act of 1930. The subsidy averaged about £15 per annum per house and in practice most local authorities paid varying subsidies, having regard to the income of the family and the number of children. This was indeed an epoch-making Act because for the first time it made it possible even for the poorest family to move into a good and healthy house at a rent which it could afford to pay. A quarter of a million houses were built under this Act; towards the end of the inter-war period about 60,000

were being built each year. A million people were moved from the slums into the new houses. The Greenwood Act, therefore, made a substantial and exceedingly important beginning in the task of rehousing the slum population under satisfactory conditions.

At the end of the inter-war period the larger local authorities had competent staffs and considerable experience in the building of houses. They were together building nearly 100,000 houses each year. They could easily have built a far larger number if it had been desired that they should do so. But it must be remembered that the local authorities were limited, almost exclusively, to building houses for families from slums or overcrowded conditions, and that they were instructed by Act of Parliament to give a preference to the large poor family. All the local authority houses were built for letting, and these regulations meant that the local authorities had deliberately to pick the poor large families who were accustomed to living in slum conditions. In other words, they did the exact reverse of a private landlord, whose aim was normally to select a good tenant, that is to say, one who had not got slum habits and who had not got large numbers of small children. The local authorities, therefore, had a management problem of the greatest difficulty, especially as regards the houses built under the Slum Clearance Act during the thirties. It is a high tribute to the local authorities of Britain that during the inter-war period they spent probably five hundred million pounds on housing, and that the work was so competently and honestly done that, in spite of the constant readiness of sections of the public to attack local authorities, there was not a single scandal of importance. And their management all over the country of over a million houses, occupied in many cases by some of the worst tenants, can fairly be called a conspicuous success.

Indeed, the whole history of local authority inter-war housing gives every ground for confidence that the local authorities could safely be entrusted with the building and management of houses, small or large, on whatever scale may be desired in the post-war days.

HOUSING IN POLITICS

Parliament began to deal with housing towards the end of the nineteenth century, but until the outbreak of World War I it was a very minor subject. In 1919 housing came into Parliament with a bang and was one of the major subjects of discussion and legislation right through the inter-war period. From the time of Lloyd George's "homes for heroes" campaign in 1919 housing

became front-page news in the Press, it was constantly discussed over the air, and public opinion insistently and continuously demanded the abolition of the slums and the rapid building of new houses for the workers. As a result every Government took action; every Government, whether Conservative or Labour, said, "We are the fellows to build houses for you. Vote for us and we will build more and better houses than the other party." Nobody doubted that there were votes in housing, and in a democracy that means that things get done.

Public opinion did not concern itself with the particular methods to be adopted in building houses or in clearing the slums. It wisely left questions of method to Parliament and to the Government, who had the benefit of the advice of the civil service, and of other experts. None the less, it was the steady pressure of public opinion demanding that the job should be done somehow which was effective in securing a new and better standard of working-class housing, in greatly increasing the rate of building, and finally in securing the great national achievement of building four million good houses during the twenty inter-war years.

In spite of the universal agreement that large numbers of houses should be built and slums cleared, there was a strong and deep-rooted difference of opinion as to the relative advantages of private enterprise and of local authority building respectively. Conservatives believe in house-ownership and in building by private enterprise, by which they meant the speculative builder; Labour wants public building and low rents to be obtained with the help of subsidies. These views were reinforced by the belief of the Conservatives that owner-occupiers are likely to vote Conservative and the corresponding Labour view that municipal tenants are likely to vote Labour.

The argument for ownership was forcibly put by a speculative builder as follows: "We do want to consider the effect on the nation's character. Municipal housing tends to develop a servile spirit, and a servile spirit brings discontent. On the other hand, the owner-occupier has a sense of independence, he is proud of his house and looks after it better than the tenant. He develops character in the sense of freedom and contentment. A nation of house-owners is very different from one of municipal tenants."

An experienced municipal housing director replies: "I have never realised that municipal housing tended to develop a 'servile spirit'. Very few of the tenants of this corporation approach my office in a 'cringing' manner, and they are certainly not without independence."

Many people take the view that what the working man needs

is a low-rented house with security of tenure and freedom to move if for any reason he wishes to do so. During the inter-war period many craftsmen on going to a new neighbourhood could not find a house to rent and were forced against their will to buy. It is of the first importance for the mobility of labour and for other reasons that there should be enough houses to let at reasonable rents for those who do not wish to purchase. The lack of such houses was during the whole of the inter-war period the most serious aspect of the housing problem.

For these reasons the Conservatives did all they could to encourage the speculative builder to build houses for sale, whereas the two Labour Governments devoted their energy to the encouragement of local authority building of houses to let at low rents. In the early years the opposition of policy was complete; but as time went on a measure of agreement grew up. Subsidies were in general not granted to private enterprise; it was the Conservatives, and not the Labour Party, who in 1927 cancelled the subsidy which Mr. Chamberlain had granted to private enterprise. The Conservatives tended to accept legislation carried by Labour once it had become established fact. The outstanding instance of this was in connection with the Greenwood Slum Clearance Act of 1930. I happened to be a member of the Committee of the House which dealt with this Act, and was impressed by the violence of the Conservative opposition. I assumed that when they came into power they would abolish it or at least greatly reduce the subsidy. But I was quite wrong; a year later they came into office, and so far from destroying the hated Act they quietly took it over, proceeded to work it with the full subsidy, and made a fine beginning of slum clearance by moving over a million persons out of the slums into new houses.

This is an interesting and instructive example of the co-operation in practice of the British political parties who differ so violently in theory, and in particular of the realistic common-sense of the Conservative Party, who, once they see that the people demand a measure and that in fact it works well, whatever their previous attitude, automatically accept it as good Conservatism. And indeed it would not be possible to have a peaceful and progressive democracy on any other terms.

WHO BUILT THE WORKING-CLASS HOUSES?

It is sometimes claimed that unsubsidised private enterprise built the greater part of the working-class houses in the inter-war period. For instance, no less an authority than Sir Jonah

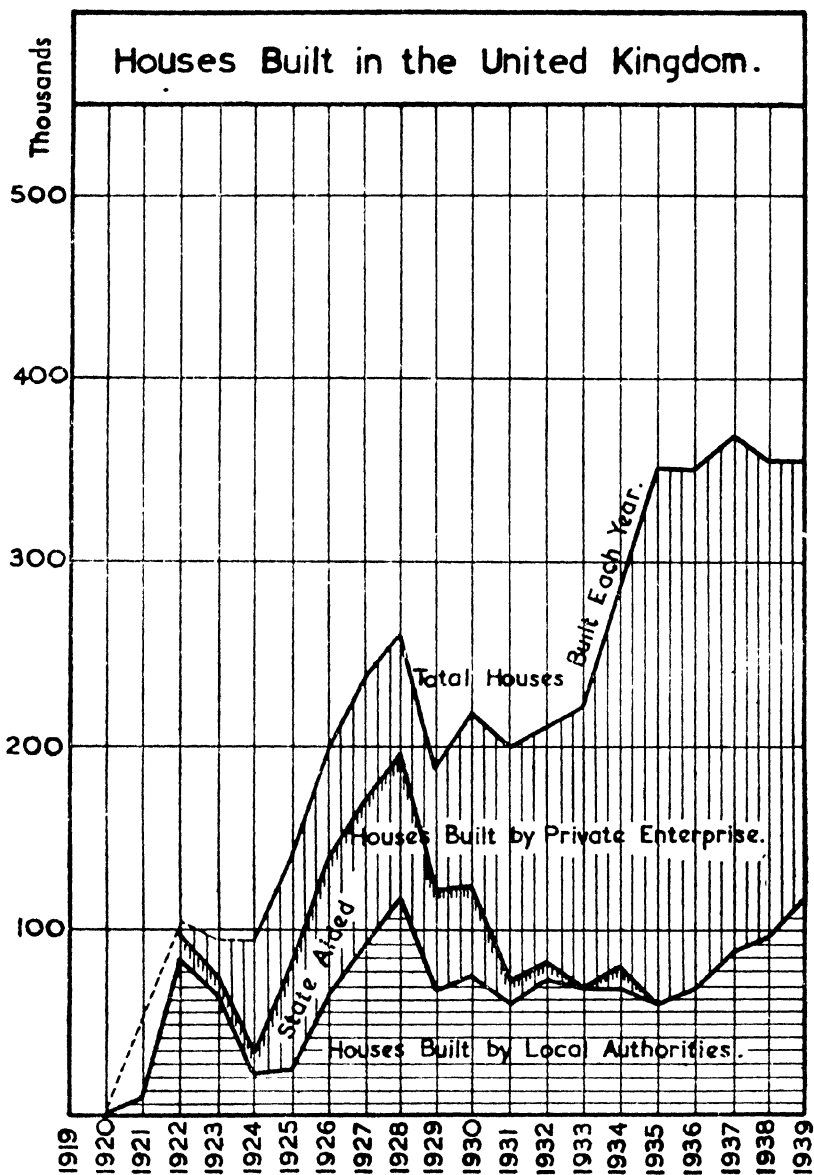


Fig. III

Walker-Smith, M.P., has stated:¹ "Private enterprise has been responsible for the erection of the vast majority of working-men's houses and has done so without any subsidy from the State."

The first thing is to attempt to define what we mean by a working-class house. The Report of the Rent Restriction Committee in 1931² defines the Class C house as a house with a rateable value of not more than £13 in the provinces. It states: "As regards Class C we shall often use the term to include all small houses, new and old, available for the working-class population". This is, so far as I know, the nearest thing that exists to an official definition of the working-class house. This means roughly that the working-class house includes all houses up to a gross inclusive rent of about 11s. in the provinces and about 16s. in London.

The 1937 Rent Restriction Report³ states:

"There were 5,000,000 Class C houses in 1914 and now there are 6,300,000, an increase of 26%. There were about 1,500,000 Class B houses in 1914 and now there are nearly 3,000,000, an increase of 100%. In the intervening period the population has only risen by 10%. The figures are only intelligible on the assumption that a large proportion of the Class B houses are being occupied by persons who were previously living in Class C houses. We assume that for the most part these persons must be the better paid members of the working classes in regular employment who are able to face the liability of increased rent or repayments to Building Societies."

The Report states further that: "The post-war Class C houses comprise:

Houses erected by local authorities	950,000
Houses erected by private enterprise	550,000
	1,500,000

Of the 550,000 houses built by private enterprise, from 150,000 to 200,000 were built for letting.

The facts given in the Report are summed up in the following table.

¹ A letter to *The Times* of May 12th, 1944.

² See Table V (p. 256), taken from the Report of the Inter-Departmental Committee on the Rent Restrictions Acts, 1931. Cmd. 3911.

³ Reports of the Inter-Departmental Committee on the Rent Restrictions Acts, 1937. Cmd. 5621.

	Old houses.	Total new houses.	Built by speculative builders.	Built by Local Authorities.
Larger houses	2,400,000	1,800,000	1,800,000	—
Working-class houses	4,800,000	1,500,000	550,000	950,000

The conclusions to be drawn from these facts and figures as regards inter-war building up to 1937 may be summarised as follows:

1. The number of middle-class houses was increased by 75%, the number of working-class houses by only 30%.

2. Of the houses built by the speculative builders, just under one-quarter were working-class houses, and under one-twelfth were built for letting.

3. Of all the working-class houses built, speculative builders provided just over one-third, local authorities just under two-thirds.

4. The working-class houses built by the speculative builders were in general for the better-off section of the working-classes. All the houses for tenants from slum-clearance schemes were built by local authorities.

CONCLUSION

Surveying the housing achievement of the inter-war period, we must, of course, admit certain failures.

It took no less than fifteen years to work up to the building of 350,000 houses per annum.

For financial reasons the houses tended to be too small.

There was no adequate control over jerry-building.

There was little or no research as to the structure or fittings of the house.

Although the planning of the housing estates was a revolutionary improvement on what had gone before, it tended to be rigid and unimaginative; not enough allowance was made for the varying tastes of the individual.

The bigger questions of planning were hardly considered at all. Far too many estates were built on the outskirts of cities which were already too big. There was much ribbon development. But these were planning rather than housing defects.

But the great fact remains that it was during this period that the social conscience of the public was finally aroused; there was strong and steady pressure to abolish slums and to build a good house for every family. Parliament made housing a major subject; the two great political parties each took effective action.

Certain results were achieved which will be important in the post-war period.

Private enterprise through the speculative builder and the building society developed methods of building houses for sale on terms which gave the owner-occupier the full advantage of ownership and at the same time many of the advantages of tenancy by spreading the cost of the purchase over a long period of weekly payments. Under this system speculative builders built over three million houses in the inter-war years and towards the end of the period, under unusually advantageous economic conditions, worked up to an average output of 270,000 houses per annum.

Local authorities were confined broadly to building houses to let to those tenants who could not afford to buy or rent a house from the speculative builder. In spite of this limitation they built over a million houses, well built, well designed and let at moderate rents. The local authorities proved that, given proper guidance and help by the Government, they could be trusted with full responsibility for building and managing houses on a large scale.

An effective method of subsidising the rents of houses was worked out. Under the Greenwood Act for the first time in history 250,000 really good houses were built and let at rents within the means of the poorest family.

Considering the national housing effort as a whole, there were two quite outstanding achievements: the first was that an entirely new minimum standard of working-class houses was adopted. The standard came somewhere near to finality in the sense that a family with two or three children living in the standard house has, so far as the house is concerned, as good a chance of health and strength as the children of the well-to-do.

Secondly, whereas in 1919 there were only eight million houses in Great Britain, in the ensuing twenty years no less than four million new houses were built. One-third of the population was by the inter-war building effort enabled to live in houses of the new standard, nearly every one with a separate garden.

That is a fine national achievement. No other great country has approached it. Germany¹ built only about half as many as we did per thousand of population. We did it; and in accord with our national custom, we say nothing about it. Few people either here or abroad realise what a magnificent start we have made towards the final goal of providing a good house for every family.

¹ See a valuable statistical analysis of the housing problem, "Housing before the War and After", by M. J. Elsas, published by P. S. King and Staples, Ltd., p. 7.

POST-WAR: THE EMERGENCY PERIOD

THE HOUSING SITUATION immediately after the war will be in many ways similar to what it was in 1919, but the demand will be even more urgent. On the other hand, the prospects for rapid and effective action are much better; indeed, the long-term prospects for building are excellent. But the problems of the first two years will be exceedingly difficult. At the time of the German armistice, building industry labour will be even scarcer than in 1918. It seems likely that accumulated repairs alone, including rebuilding after bomb damage, would be sufficient to employ the whole of the building labour available for two years after the armistice, leaving nothing whatever over for housing or other purposes. This will, of course, not be allowed to happen. The Government will work out its building programme, giving what it judges to be the right priority to bomb damage, to repairs, to housing, to new factories, etc. But it is striking evidence of the difficulties that will have to be faced during those first two years.

As a result of these considerations, the Government has wisely announced that the first two years after the armistice will be regarded as an emergency period for housing, and that very special efforts will be made to ensure that the maximum possible number of houses shall be completed during that period, so as to meet the demands specially of the ex-Service men, as well as the most urgent other demands.

I have already explained the preparations that are being made by the Ministry of Labour to secure a rapid increase in the supply of labour in the building industry, in order to ensure that the industry shall, within about four years after the war, have one and a quarter million operatives—a man-power 20% larger than it was in 1939. If this result is achieved, the building industry will be in a position to carry out the long-term building programme of 400,000 houses a year, and at the same time to do much in other directions towards the rebuilding of Britain. But these results take time, and as regards the emergency period, in spite of the maximum efforts that the Ministry of Labour can make, the shortage of skilled building industry labour will remain exceedingly acute.

Since it is unlikely that private enterprise can contribute substantially during the emergency period, the Ministry of Health has concentrated on making preparations to enable the local authorities to build as fast as possible during that period. The Government has at the time of writing (June 1944) already taken the following steps:

(a) Repairs to bombed houses are now being vigorously dealt with, with the aim of getting the whole of this work finished, if possible, before the armistice.

(b) Local authorities have been given the necessary facilities to acquire immediately sites for the first 300,000 houses.

(c) Local authorities have also been authorised to prepare the sites for these houses by putting in the main drainage and preparing the roads, so that the sites will be ready for immediate use after the armistice.

(d) The Dudley Committee has reported fully on the types of house that should be built after the war.

(e) The Minister of Health is negotiating with the local authorities as regards the subsidies that will be granted in the emergency period.

The Minister of Health has announced that he hopes to have completed or in construction 100,000 houses at the end of the first year, and 200,000 at the end of the second year. Having regard to the immense difficulties, I propose to assume that he will succeed in *completing* 50,000 houses in the first year and 100,000 in the second.

Turning to the Ministry of Works, I have described the remarkable activities of the Ministry in research, in strengthening the scientific basis of the industry, in development, in standardisation, in producing codes of practice, and in building experimental and demonstration houses to test out fittings and different methods of construction. I have also referred to the now famous Portal house.¹ This was produced by Lord Portal because the one insuperable difficulty in the way of building anything approaching the large number of houses that would be so desperately needed immediately after the war was the shortage of building trade labour. He accordingly designed a pre-fabricated house which could be erected with an insignificant number of building trade workers on the site; perhaps half a dozen men for a week. This meant in effect bringing in existing labour from other industries, for example, the pressed-steel industry, to supplement temporarily the inadequate amount of labour in the building industry.

To make a completely pre-fabricated house and to put it into large production straight away is a bold undertaking, and it is admitted that this house cannot be expected to be fully up to the standard of a permanent house. It has accordingly been decided that the houses shall be temporary, and that in order to keep the costs low they shall be small. It is estimated that each bungalow

¹ See Chapter VII, p. 55, and Chapter VIII, p. 60.

of 600 sq. ft. floor area will cost about £550, which will include nearly £100 for fittings not normally provided by the landlord. The house, therefore, including the normal fittings, would cost £450, a reasonable price under the conditions of 1944. Lord Portal has announced that he proposes to build 2,000 houses a week in the first year. We may thus hope that 100,000 houses will be completed in the first year after the armistice, and the same number (or perhaps more) in the second year.

If the Ministry of Works and the Ministry of Health both fulfil the programmes suggested above, we shall have:

First year	. 100,000 temporary houses
	50,000 permanent houses

Total	. . 150,000 houses
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Second year	100,000 temporary houses
	100,000 permanent houses

Total	. . 200,000 houses
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It will be remembered that after the last war 37,000 houses were completed in the first two years. If after this war the Government succeeds in the emergency period of two years in completing 350,000 houses it will deserve our gratitude and our praise.¹

CHAPTER XIII

THE LONG-TERM PROGRAMME

FOR A HUNDRED years or more the number of houses built in Britain failed to keep pace with the increasing number of families who wanted separate houses. Undoubtedly the high rate of building in the thirties substantially reduced the shortage, but the Minister of Health estimates that we still need one and a half million houses to give each family a separate dwelling.

The first thing we must do in examining the post-war housing situation is to consider the three aspects of the housing programme:

How many houses do we need?

At what rate shall they be built?

For what classes of families?

¹ The difference between the state of preparedness of the local authorities for planning and for building houses after the last war and after this one is encouraging and indeed startling. It is concretely illustrated by the case of Manchester. See Chapter XXVIII, p. 203.

All sorts of elaborate calculations have been made in this matter. These estimates proceed on the basis of dividing up the demand into a number of categories and then trying to estimate the numbers under each heading.

The categories are broadly as follows :

1. Houses destroyed by bombing.
2. Houses needed to reduce overcrowding.
3. Houses to meet future increase in the number of families.
4. A reserve of empties for flexibility.
5. Additional houses in certain areas to meet any redistribution of the population.
6. Houses needed for slum clearance.
7. Houses needed to replace sub-standard houses which are yet not of so low a standard as to be officially condemned as unfit for human habitation.

Unfortunately, while it is possible to form a reliable estimate of the number required to replace bombed houses, and perhaps of the reserve of empties required for flexibility, most of the other estimates can be nothing better than intelligent guesses, since they depend on the judgment of the public and of Parliament as to standards of overcrowding and of the quality of houses, or on the future size of the family, which again depends partly on the birth rate and partly on the decision of various groups as to whether they will live separately or together.¹

For these reasons, elaborate research into the future requirements of housing is of little useful value. The only practical solution is undoubtedly the one adopted by the Government: to study the problem in all its aspects, to give full consideration to the urgency of housing, to other demands for labour, to the financial situation, and to other relevant factors, then to fix the number of houses to be built over a period sufficiently long to render it possible for the building industry to be adjusted to the

¹ The following statement by Professor Carr Saunders shows the extraordinary variations in the size of the family in the past. Who could have predicted this, and who can predict how big the families will be in future?

"During the last seventy years, the birth rate has fallen and families have become smaller; the death rate has fallen also and men and women live longer. Out of a hundred people, taken at random from the population seventy years ago, there would have been a number of large families consisting of parents and several children, each family needing its own home. Out of a hundred people, chosen at random to-day, there are nearly twice as many families as formerly, because the average size of a family is little more than half what it used to be. But each family still wants its own house, and therefore nearly twice as many houses are needed to accommodate a hundred people as used to be the case."

necessary size, and for town and country planners to know at what speed the new houses will be built. The Government's decision was announced by the Minister of Health¹ in the following terms:

"The generally accepted estimate of 3,000,000 to 4,000,000 houses is a broad indication of the probable housing need during the first 10 to 12 years of the peace, and has been arrived at not so much by the combination of a series of detailed estimates, which could not be precise, as by reference to the two overriding considerations, namely, the number of dwellings required to replace slum dwellings and dwellings in a poor condition or grossly deficient in modern amenities and the number required to give each family a separate dwelling and so eliminate overcrowding. 1,500,000 to 2,500,000 dwellings are included for the former purpose and 1,500,000 for the latter. Compared with these figures the number of houses destroyed or damaged beyond repair is, I am glad to say, not material."

Under these conditions, I estimate that the number of permanent houses completed each year after the war, if the whole matter is vigorously tackled, is likely to be about as follows:

1st year	.	.	50,000
2nd year	.	.	100,000
3rd year	.	.	250,000
4th and every succeeding year			400,000

This programme would give four million houses in twelve years.

At the end of the twelve-year period the building industry should have settled down to a high degree of efficiency and should be in a position to continue to build 400,000 houses a year, as well as all the other necessary buildings. It is to be hoped that we shall continue building houses at about the same speed for a second programme of, say, three million houses in eight years, which would in that case be completed twenty years after the armistice.

At the date of the armistice there will be in Great Britain about 12½ million houses. Of these, 8½ million will be pre-1914 houses and 4 million inter-war houses. Assuming that the total number of houses needed is likely to be 13½ million, the following table shows how these will be made up after twelve years and after twenty years respectively.

¹ Parliamentary Debates, Commons, 1st December, 1943, column 392.

Estimated Number of Houses in Great Britain

	At date of Armistice. Say 1945.	After first 12- year pro- gramme of 4 million. Say 1957.	After second 8- year pro- gramme of 3 million. Say 1965.
	Millions.	Millions.	Millions.
Total number	12½	13½	13½
Pre-1914	8½	5½	2½
Inter-war	4	4	4
Post-war	0	4	7

This means that if we carry out the programme, we shall in twenty years have only 2½ million pre-1914 houses left. Since there are probably 2½ million of those houses which will still be as good as the inter-war houses, this will complete the process of giving every family in the country a house at least up to inter-war standard level.

DELAY SLUM CLEARANCE

A serious mistake was made in 1930 when the Greenwood subsidy was made available for new houses only on condition that when a family from a slum-clearance area had been put into the new house, the slum house was pulled down. The reason for this was as follows. Up to that date, although a number of fairly low-rented houses had been built, practically no slum houses had been pulled down. People, therefore, said that nothing was being done for the slums and there was a clamour for effective action. The Greenwood Act meant that every time a new house was built a slum house was pulled down and one particular family was moved from the slum to the suburb. The public could see that something was being done about the slums and were satisfied. What they failed to see was that the worst living conditions were not in slum houses but in the desperately overcrowded conditions which so often prevailed in larger houses let in lodgings.¹ Generally speaking, these were middle-class houses, with most inadequate amenities, usually one water-closet and one or two taps, let to several families. Such houses were often the only accommodation available for the poorer families; they were crowded with children and the conditions were shocking. Thousands of families under these conditions would, if the slum houses had not been pulled down, have moved into them, where they would have

¹ See "The Anti-Slum Campaign" (Longmans, Green & Co.), pp. 88-89.

had space and conditions incomparably better than in their lodgings. I believe that the difference in conditions for a family moving from a house let in lodgings to a slum house might often be as great as that of the family moving from the slum house to a new suburban estate.

The Greenwood Act secured the building, in the six years ending March 1939, of 273,000 new houses, all of which were immediately occupied by families coming directly from the slums. 242,000 houses were demolished in the same period. This was generally regarded as a great success, and indeed it was a fine beginning of the re-housing of poorer families from the slums. But the demolition of most of the 242,000 houses was a bad mistake. If, say, 200,000 of them had been left temporarily in existence, they would have been occupied by families from houses let in lodgings, who would to-day be much better off than they are.

In any case, the limitation of subsidies to families from the slums will after the war be impossible, since the first claim will be for ex-Service men with families who have no houses at all. If the old Greenwood condition prevailed, the subsidies would be confined after the war to those families who happened to live in a slum and would exclude the homeless ex-Service men. This is unthinkable, and it may therefore be assumed that subsidies after the war will be available to families in accordance with their needs, whether they are homeless, whether they are living in overcrowded conditions, or whether they are in a slum.

It is also to be hoped that further slums will not be pulled down until there are no families left without a house at all. If the Minister of Health was right when he estimated that one and a half million additional houses were needed to provide a separate house for each family, and if the Government programme of building is adhered to, then, with the help of the emergency Portal houses, there should be one house for every family in about five years after the armistice. Then will be the time when the physical destruction of the slums should begin, and one slum house should be destroyed for every new house built.

THE NUMBER OF SLUM HOUSES

How many "slum" houses are there? This depends on public opinion, as interpreted by Parliament and by medical officers of health as to how many houses are "unfit for human habitation". The demand of public opinion as to the quality of the house rose rapidly after the last war; apparently it has risen much more rapidly during the present war. The M.O.H. for Manchester has now declared no less than 68,000 houses as unfit for human

habitation, and this figure, covering 38% of the houses in the city, has been accepted by the City Council.

In Birmingham, the City Engineer has surveyed the 330,000 houses, and found 63,000 of them due to be condemned, with another 40,000 or so to follow within ten years. In other words, a third of the houses in Birmingham are "slum" houses.

Judging by the trend of the last generation, public opinion is likely as time goes on to continue to regard an increasing proportion of houses as slum houses. It would, therefore, seem to be a reasonable guess to take not less than one-third of all the existing houses as "slum" houses, to be cleared as soon as possible. That gives us four million slum houses.¹

THE OBSOLESCENT HOUSE

If we continue our programme of 400,000 houses a year for twenty years, we shall then have built seven million houses. Of these, one and a half million will be needed to provide a house for every family; four million for slum clearance, leaving one and a half million to replace obsolescent houses.

This may raise questions of great difficulty. If we proceed to build new houses at high speed to replace the obsolescent houses, will the dwellers in the obsolescent houses be prepared to pay the extra rent or price of the new houses? This will depend on the advantages of the new house, on the difference in rent or cost, and on the ability and will of the tenants to pay the higher rent. The owners of the obsolescent houses will only pull them down if they cannot be sold or let at a figure that pays better than destruction; they are likely therefore to be available at very low rents.

It has been estimated that the total number of houses demolished in Great Britain for all purposes other than slum clearance between 1914 and 1936 was only 70,000.² In other words, obsolescent houses were only pulled down to make way for new improvements, not because they were getting out of date. It is quite impossible to forecast the speed at which obsolescent houses will be pulled down by their owners in the twenty years after the war. It is likely that they will remain available in large numbers and at low rents. If so, they will provide a new and exceedingly difficult problem in carrying out the full housing programme, since it is doubtful whether public opinion will insist on compulsory closing of a house which cannot be condemned as unfit for human

¹ It is estimated that from two and a half to three million of the existing houses were built before 1861, and will therefore be at least one hundred years old before the clearance of the four million houses can be completed.

² Reports of the Inter-Departmental Committee on the Rent Restriction Acts, 1937, p. 14.

habitation. It has been frequently suggested that a definite period might be put by the Government on the life of a house, and that at the end of this period a house can be demolished without compensation. This is a major problem of town planning and of housing and should be given serious and early consideration, since it will be necessary to give fairly long notice if such houses are to be destroyed with little or no compensation.

THE THREE STAGES OF BUILDING

To sum up, the twenty-year programme should be divided into the following stages:

Stage 1.—A house for every family. The first one and a half million houses should be additional houses; during this period no houses should be pulled down if it can possibly be avoided. This stage should take about five years.

Stage 2.—Clear and replace the slums. Four million new houses to be built for slum clearance in ten years; the four million cleared houses to be pulled down. Stage 2 should be completed in sixteen years after the armistice.

Stage 3.—Clear and replace one and a half million obsolescent houses. This should take four years, completing the whole programme twenty years after the armistice.

The three stages as given above are right and logical if the houses are to be built strictly in accordance with the degree of need of the family. But it would be exceedingly difficult to carry out and it is, in fact, not the way things are done in this country. There will, therefore, be overlapping between the stages. Some slum clearance will probably go on during the first five years, though this could and should be prevented by the Government, at least until the later years. Private enterprise will begin to build as soon as it is economically practicable to build for those who can afford to move, and certain obsolescent houses may be destroyed in the early years. But it is of the utmost importance that the following priorities should be as closely as possible adhered to:

1. Abolish overcrowding.
2. Abolish the slums.
3. Abolish the obsolescent house.

CHAPTER XIV

STANDARDS

THE INTER-WAR STANDARD house represented a revolutionary advance as against any previous housing for the working classes. No similar leap forward can be expected after the present war. But we have an additional twenty-five years of experience, and public opinion is tending steadily to demand a rising standard of housing accommodation. A good general statement of what future housing standards should be is the following, taken from the report of the Conservative Sub-Committee on Housing.¹

“For every family that requires it we desire to see a separate dwelling soundly constructed and self-contained. It should be near enough to the occupant’s place of work, but within reasonable distance of the open country. The church, the school, the shops, the local centre of entertainment—whether super-cinema or village hall—should be close at hand. In the case of a family with children, it must be large enough to accommodate them without overcrowding. Its cost, whether expressed in rent or terms for purchase, must fall within the occupier’s means. It should be a thing of beauty, domestic in scale and in feeling. It should be of simple, unaffected design and possess a personal quality, particularly in its internal arrangement and decoration, that will endear it to its occupants and help them make it a home; but externally it should be well-mannered enough to agree with its neighbours and refrain from vulgar proclamation of its difference from all the rest. Above all, wherever possible, it should consist of a private house with a garden of its own.”

One thing is clear, that if we are to get houses as well designed as those here described, it is necessary that a competent architect should be fully responsible for the design of every new house. The Ministry of Health should be able to enforce this as regards local authorities; but it is a difficult thing to enforce on the speculative builder. It is a matter to which the Ministry should give urgent consideration.

THE DUDLEY REPORT

The whole question of post-war standards has been fully examined in a report “Design of Dwellings” by a Committee of the

¹ “Foundation for Housing”, published by the Conservative Party Organisation, 24 Old Queen Street, S.W. 1. March, 1944.

Ministry of Health under the chairmanship of Lord Dudley. The Dudley Committee examined a large number of witnesses and covers the whole field of housing design pretty thoroughly. It makes many recommendations, the most important of which is undoubtedly the increase of the minimum size of the standard house, which was often as low as 700 sq. ft. in the inter-war period, to a minimum of about 900 sq. ft. In addition to this, it recommends an outbuilding of 90 sq. ft. These two additions in themselves will cost nearly £100, on the assumption made by the Dudley Committee throughout its report that building costs in the post-war years will be 30% above the 1939 level. There can be little doubt that all the recommendations of the report represent useful improvements, and the report will be of great value to local authorities and speculative builders when settling the design of their houses.

WHAT CAN WE AFFORD?

The recommendations of the Dudley Report result in a house which, with prices at 30% above pre-war, will cost £700.¹ At 3% the net economic rent would be 12s. 6d. a week. If the interest were slightly over 3%, the gross rent of the Dudley house, including rates, will be about £1 weekly.²

I have elsewhere³ suggested that if the cost of living and the general level of wages in the post-war era, after things have settled down, should be 30% above the 1939 level, then the maximum

¹ The Dudley report publishes a table on p. 49 which gives the cost of the house it recommends as £467 on the basis of March 1939 prices, assuming production, both of materials and of components and of the house itself, to be carried out with the same standards of efficiency as in March 1939. It assumes that cost after the war will increase by 30%. This would bring the cost up to £607. To this must be added the cost of developed land, which in inter-war days averaged £70 and at a 30% increase would cost £90 after the war. The cost of the Dudley minimum house would therefore be as follows:

Cost of 1939 house	.	.	.	.	.	335	} at 1939 prices.
Additions recommended	.	.	.	.	.	132	
Cost of Dudley house	.	.	.	.	.	467	} at post-war prices say, £700.
Add 30% post-war increased costs	.	.	.	.	.	140	
Cost of Dudley house	.	.	.	.	.	607	} at post-war prices say, £700.
Developed land	.	.	.	.	.	90	
Cost of Dudley house, including land	.	.	.	.	.	697	

² See Table VI, p. 256.

³ See pp. 114-115.

amount of subsidy that the taxpayers are likely to be willing to pay to complete the housing programme would mean that the minimum standard post-war house must not cost more than £600. To adopt a standard which would involve a cost above £600 would, I believe, at some stage cause a revolt of the taxpayer, which would almost inevitably result in another violent cut in the rate of house-building, similar to the one enforced by the Government after the 1920 boom. This would be likely also to result ultimately in a cut in the standard of housing more drastic than would occur if the original cost had been more reasonable. Nothing could be more disastrous to the stability of the whole long-term housing programme.

If my conclusion is right, then instead of £170 for improvements there will be only £70 available. There is only one satisfactory solution to this difficulty: to build the houses more cheaply. I have dealt with this elsewhere,¹ and expressed my belief that by the vigorous and skilful application on a large scale of the best modern methods of pre-fabrication, mass production and mass sales, the £700 Dudley house might be produced for £600. Till that time arrives, it is not likely that local authorities will in practice be allowed to build houses with all the improvements suggested in the Dudley Report for slum-clearance purposes.

USE OF HEAT IN DWELLINGS

While the Dudley Report gives many valuable recommendations, there are three matters which seem to me to be of outstanding importance and which are hardly dealt with in the report: the proper use of heat in the house, the question of gardens, and the question of the use of bedrooms as sitting-rooms.

Perhaps the most unsatisfactory feature of the inter-war houses was the way in which fuel was consumed for the three main purposes of warming the house, cooking, and heating the water. Before World War I working-class houses were provided with an open coal fire and the old type of kitchen range, and sometimes with a back boiler. It was a most extravagant system in fuel consumption and it produced the largest possible quantities of smoke. Only a country with plenty of cheap coal and willing to accept a filthy atmosphere for its cities, could have developed and used such a system.

In the inter-war days the new houses were as a rule fitted with a fairly economical coal cooker with a back boiler, and one or two coal fires; generally a gas or electric cooker and often some gas or

¹ See Chapter VIII, p. 58, and Chapter XV, p. 111.

electric heaters. This represented a considerable improvement on the old days, but there is still a long way to go.

The following tables are taken from the Presidential Address of Mr. Oscar Faber,¹ M.Inst.C.E., M.I.Mech.E., delivered in February 1944 to the Institution of Heating and Ventilating Engineers.

Domestic Fuel Consumption in 1937 in Great Britain, U.S.A. and Germany

Country.	No. of households.		Population.		Therms per house.
Great Britain	10	3	44	10 ⁶	1500
U.S.A.	32	10 ⁶	129	10 ⁶	1710
Germany	13	10 ⁶	66	10 ⁶	880

The average climate in Germany is far colder than in Britain; they heat their houses, including their bedrooms, to a higher temperature, and yet they use only 60% of the amount of fuel used in Britain for each house. This must mean that the efficiency with which the fuel is consumed in German houses is just about double what it is in Britain.

Use of Coal in England in 1937

Domestic Heating:	Raw Coal	37	million tons
	Gas and Coke	13	" "
	Electricity	3	" "
		53	" "
Export		56	" "
Industry and other purposes		131	" "
		240	" "

The above table shows that we consume over 50 million tons per annum in our houses, so that to double the efficiency would mean an economy of no less than 25 million tons of coal per annum.

What are the reasons for this astonishing difference? The following table gives Mr. Faber's estimate of efficiency of the various kinds of heating apparatus which are available.

¹ Also from the Report of the Heating and Ventilation Committee of the Building Research Board of the Department of Scientific and Industrial Research.

Cost per Therm to the Householder

Closed coal or coke stove	.	.	.	3·7d.
Closed anthracite stove	.	.	.	4·4d.
District heating	.	.	.	5·0d.
Open coal fire	.	.	.	10·0d.
Electric heater	.	.	.	14·6d.
Gas fire	.	.	.	16·0d.

It should be pointed out that the figures in this table vary widely according to local conditions and according to the efficiency of the particular apparatus, to the length of time it is lit, and according to many other conditions. They are controversial figures which are open to dispute, but they are given by Mr. Faber, a high authority, on the ground that it is important that the public should have some knowledge of relative efficiencies and that in his judgment these figures are near enough to average conditions to be of real value for comparative purposes.

The most important conclusion to be drawn from these figures, and from Mr. Faber's report as a whole, is that the open coal fire is the chief cause of inefficiency and of smoke. As Mr. Faber says: "The open fire is probably that type of apparatus which involves the maximum of labour, dirt, and smoke, of any of the methods of heating which are open to us." It also burns the maximum amount of fuel to warm the house. Mr. Faber points out that the coal fire causes the following inconveniences to the householder :

(a) The labour in the house in carrying coal and coke and stoking.

(b) The labour in lighting fires and tending them, and cleaning them out.

(c) The cost of the additional cleaning in the house.

(d) The cost of abating to some extent the evils resulting from the atmospheric pollution, such as increased deterioration of the fabrics of the buildings, damage to the health of the people, increased use and cost of upkeep of roads and many other incidental costs.

The efficiency of the open coal fire is 25% or less; the closed stove, as used in Germany, has an efficiency of about 70%.

Mr. Faber estimates that by replacing the open coal fire by more efficient apparatus of types already known, we could save no less than 20 million tons per annum and go a long way to abolishing the smoke nuisance, which causes immense damage and is the chief factor in making the central parts of our cities so unpleasant to live in.

So much for the disadvantages of the open coal fire. On the other hand, we all of us love it; it is pleasant and healthy, it ventilates well, it gives out a varying radiant heat; to sit in front of a good coal fire adds much to the pleasure of an evening. The open coal fire is an established British institution, and it is doubtful whether we shall be willing to give it up.

But the disadvantages are so immense that the time has come when we ought to give very serious consideration to the possibility of abolishing the open coal fire as regards the 7 million houses which we are likely to build in the next twenty years, and substituting for it something more efficient and as nearly as possible equally pleasant. One possibility is the new closable stove, which it is hoped may burn any solid fuel, with a fairly high efficiency when closed, and which can be opened when desired and used as a coal fire, with a relatively low efficiency. Such apparatus is being developed in a practical form, though it is as yet by no means perfect.

I do not propose to attempt here to deal any further with the remedies for the present inefficiencies in the use of fuel either for space heating or water heating. Much research and development work are required. The Egerton Committee has made an important beginning by collecting the available scientific data and publishing an authoritative report, which will be a valuable foundation for further developments. The three industries, solid fuel, gas, electricity, are actively at work on research and development on a larger scale than ever before. The Fuel Research Station and the Building Research Station are both making valuable investigations. It is important that the Ministry of Fuel and the Ministry of Works should direct and co-ordinate research and development in this large and varied field.

There is one important service which the Ministry of Fuel might perform. At present architects and householders can get advice on heating only from experts interested in one or other kind of fuel. It would be an immense advantage if there were a national service of fuel experts available to advise impartially on any problem of heating or cooking. Manchester City Council, for instance, has now two very fine showrooms at opposite ends of the same building, in one of which all the latest gas apparatus can be seen and all the advantages of gas can be learnt from experts, and in the other one can learn all about the services of electricity. A common showroom, where both kinds of apparatus, along with solid fuel apparatus, could be demonstrated by impartial experts, would do much to increase efficiency and economy.

GARDENS AND OPEN SPACES

In the inter-war years gardens were introduced to the life of the lower-income classes on a very large scale, and on the whole with great success and beneficial results. But, as was inevitable in so sudden and so great a revolution in social habits, mistakes were made. "Twelve to the acre" became almost a rigid rule. Gardens were nearly all the same size and were attached to practically every house.

While they were much appreciated by millions of families, this was by no means universal. An experienced housing manager estimates that over half the families appreciate their gardens and use them fully and well; that a third are lukewarm and require a certain amount of encouragement to make them keep their gardens in good order; finally, that 5% to 10% do not want the gardens, regard them as a burden, and do not keep them even decently unless they are vigorously persuaded and almost dragooned to keep the weeds down and the hedges clipped.

The garden has two main uses: firstly, as an "outdoor room" for the pram, a private and safe place for the family to sit in and for the smaller children to play, and secondly, as providing a healthy occupation for the father of the family and for producing vegetables and flowers. Where the father has the time and inclination to deal with the garden, all is well. But a reluctant tenant ought not to be compelled to have a large garden, as was commonly the case in the inter-war period because no houses without such gardens were available. In some cases, the fact that houses had large gardens permanently attached to them caused serious hardship. Take the case of a family with several children. The husband, who was perhaps a keen gardener, dies; the widow likes the house, which is just right for her family, but finds the garden a grievous burden; indeed, it may be quite impossible for her to give the necessary time to keep it in order. She may be forced to leave the house she likes and at considerable expense and inconvenience to move into another.

What is the solution? Is it not wrong to have a large garden attached to each house? "Twelve to the acre" is probably about right as an over-all figure for lower-income houses, but the land ought certainly not to be exclusively devoted to gardens and ought certainly not to be equally divided. There ought probably to be only the essential minimum of land belonging to each house, so that the tenant who does not want a garden need not have more than a small one. On the other hand, every tenant who wishes it ought to be able to have the standard type of garden and an allotment in addition. There ought to be the maximum

variety to suit all tastes. The solution of this problem is far from being easy; some planners are considering it on the following lines.

The front garden should be a strip of grass with trees or shrubs, without any fence, and should be kept in order by the local authority. This method is almost universal in America and a few examples already exist in this country. When well designed and well tended, a street can in this way be made a place of beauty, attractive and pleasant both for the passers-by and for the tenants.

The back garden should be small; it should be made as private as possible by a good fence. It should, as the following quotation from the *Journal of the Institute of Landscape Architects* (December, 1942) suggests, be used as an "outdoor room".

"The 'outdoor room' should combine the functions of the 'back yard' of some houses and the 'terrace' of others. It should provide enough open paved space for some chairs and a small table and for play space for children under 7.

"A surrounding border a few feet wide, preferably raised above ground level for ease of maintenance, would accommodate:

- (a) Flowers for decoration:
- (b) Herbs for the pot:
- (c) A small tree or two for shade, fruit and flowers:
- (d) A sand pit for children's play:
- (e) A small rainwater tank connected with roof guttering (main water also needed for hose watering).

"Such a plot would go far towards meeting the need of the innate cultivator. Its upkeep requirements could be varied enormously according to the type of planting chosen. For a minimum of upkeep, sturdy dwarf shrubs calculated to fill the space, but not requiring pruning, could be used, while at the other extreme, a keen gardener could introduce alpinists, rare specimens, and shrubs needing skilled care.

"In order to ensure the best use of such outdoor rooms, and to prevent their deterioration, the main structure, paving, walls, etc., should be included with the rest of the house, and not left to the tenant. Brightness and cheerfulness should be given by the use of suitable materials and colouring in walls and paving. Planting, on the other hand, giving endless scope for individuality, is essentially a matter for the occupier.

"It seems probable that such an outdoor room, well designed and related to the house, would satisfy the need for private garden space of a large proportion of the community. It can also be assumed that those households that required more space

near the house would want it to accommodate a small lawn, more flowers, and probably some fruit, though not necessarily vegetables. If a vegetable plot were required without further ornamental garden, an allotment plot would usually meet the case."

The considerable amount of surplus land which becomes available when only so small a garden is attached to each house might be divided as follows. Firstly, a substantial part of it would be used as usual for larger parks, playing-fields and playgrounds for the older children. But in addition to this, there should be a series of small open spaces, which would include:

- (a) allotments,
- (b) playgrounds for small children up to about eleven years of age,
- (c) quiet and pleasant little rest parks with trees and benches for the old and for mothers with prams or small children.

All these small open spaces should be maintained by the local authority. The cost of maintenance, including the front gardens, would amount to a charge of 2*d.* or at most 3*d.* a week on the rents. The neighbourhood unit offers an ideal setting for such plans. The planner and the landscape architect should have an exciting time planning the available space in neighbourhood units so that every facility for health and recreation shall be available in the easiest and pleasantest way for every man, woman and child living in the unit.

THE BED-SITTING ROOM

The great bulk of the houses built in the inter-war years had three bedrooms. These bedrooms are used for sleeping and dressing and almost never for anything else. The bed-sitting room among the lower-income classes is practically unknown. During day-time, nearly half the space in the house, which consists of bedrooms, is wasted.

This is very different from the conditions elsewhere. In most northern European countries central heating is universal and includes the bedrooms. For instance, in Sweden the houses and flats are much smaller than ours, but almost every room is used both for living and for sleeping. The aim is to make each room into a convenient bedroom at night and a comfortable sitting-room by day. Much ingenuity has been shown in designing furniture which in day-time is a sofa or chair; nobody could guess that at night it becomes a bed.

The middle classes in England are accustomed to the bed-

sitting-room. For instance, in the halls of residence at provincial universities every student has a single bed-sitting room. Nobody suggests that they are unhealthy or unpleasant; on the contrary, they are much appreciated. The universities cannot afford to give each student a separate bedroom and sitting-room. Not only would it be beyond their means to do so, but it would by general agreement be totally unnecessary.

Opportunities for quiet study for the children or the father in the inter-war standard houses are pitifully inadequate. The following is the view of one of the most experienced women experts on housing.¹

"It has not been usual to provide means of heating in the smallest bedrooms, but it is desirable to do so on many grounds, especially in view of the possible use of the room as a place for doing lessons. Their part-time use as studies might well be borne in mind also in planning the second bedrooms, for with the greatly extended education that is foreshadowed, not only children, but also sons and daughters who are earning, will need a quiet place to themselves in the evenings. This is an important matter when the house has no second living-room. One has seen secondary school children in poor households struggling with their lessons in the family's only living-room, distracted by the noise of their younger brothers and sisters and the occupations of the grown-ups. Some years ago, when the house shortage was very acute, I came across a sixteen-year-old boy who paid a neighbour 6*d.* a week out of his earnings for the privilege of studying in her parlour."

Another experienced woman teacher writes as follows:

"I called to see the parents of one of our children and noticed that they had black-out curtains drawn across the bow window, cutting off, as it seemed to me, valuable space in a room already small. When I asked about the child, the mother pulled aside the curtain and there, by the last light of the evening, a little brother and sister were doing their homework. The curtains muffled the constantly used wireless, the mother said, and they could work better behind the curtain than with all the noise in the room.

"There are two other types of person to whom the bed-sitting-room will be very important: the unmarried woman and the injured soldier. The unmarried woman is likely to be a big problem now that so many women will not be able to marry—

¹ "The Small House," by Marion FitzGerald (Dent), p. 13.

her lot might be brightened if her bedroom could be used as a sitting-room and she need not feel she was always in the way. I know one woman who lives in a most unsavoury district in a small room, for cheapness, who told me she preferred it to being tolerated as a nuisance in someone else's house. If she could have a room of her own, she could pay a bit extra, but there was no fireplace in the little bedroom in her sister's house; what she liked about her own room was that she could have her own bit of fire."

Bed-sitting rooms would have another advantage: they would mean that the children would spend less time in the living-room. To many parents this would be a tremendous relief.

I remember in 1936 when I visited a large number of houses in Moscow, where overcrowding was desperate and where the people believed passionately in the importance of education, seeing a single room occupied by two parents and children of ten and twelve. The room was about 20 ft. long and 8 ft. wide, and the whole family had to live and eat and sleep in this small and crowded room. But so keen were the parents that their children should get a good education that they had curtained off 6 ft. at the end of the room as a study for the children. On each side was a desk with an electric light on it, and when I visited there were two children working at their tasks in their little curtained-off apartment.

The Dudley Report recognises the difficulty of quiet study under the conditions of the inter-war standard house.

"We do not think it is generally realised how frequently separate meals have to be prepared for a working family, where meal-times depend on hours of work and school and where on week-days it rarely happens that the whole family can sit down to table at the same time. The following time-table is not unusual in an average working household:

- 7 a.m. Breakfast for husband.
- 8 a.m. Breakfast for children.
- 12.30 p.m. Lunch for children.
- 4.30 p.m. Tea for children.
- 6 p.m. Tea for husband.
- 7-8 p.m. Supper for children.
- 9 p.m. Supper for husband.

"If all these meals are eaten in the living-room, it is clear that it will seldom be available for any other purpose, whereas our evidence shows an increasing need for a quiet place for

study, social intercourse and recreation. These needs cannot properly be met by a room which is never free from the constant bustle of getting meals.

"To meet these needs we consider that the municipal house of the future should provide two good rooms on the ground floor, so that meals need not interfere with other activities. We suggest that meals be taken either in a kitchen designed for the purpose, or in a dining recess off the living-room."¹

This is an important recommendation. It is to be hoped that the old parlour house, where the parlour was kept for rare occasions, will no longer be built, and that the second room will be fully used for living purposes. Very often it would be invaluable as a nursery or playroom for the younger children. It is not only the older boys and girls who need a room to themselves for study, but also the younger children as soon as they are old enough to play without the mother's constant supervision.

But although the provision of a second living-room is an important step in the right direction, for serious study the young person ought to have a room of his own. A living-room, even with a dining recess in which three meals may be served after six o'clock and in which the family life is going on, does not provide conditions under which the average young person can do his best work.

But a "room of one's own" can be easily provided by the simple and inexpensive method of doing in working-class houses what is already done in Sweden and in our university halls of residence: by using the bedroom also as a sitting-room. Central heating is unknown: the rooms are, therefore, cold and uncomfortable in winter. Even where there is a fireplace, it is almost always considered to be too expensive to light a fire specially for purposes of study. The installation of some form of central heating would make all the difference. Indeed, it would probably be sufficient if there was a certain amount of "background" heating in the bedrooms, either by radiators or by hot air, not enough to keep the room comfortably warm, but to take the chill off. Then there should be an electric or gas fire which can be used when necessary. Under these conditions, the second bedroom, which according to the Dudley Report is to be 110 sq. ft. in future, can be made into an exceedingly pleasant bed-sitting room for one person; even the third bedroom at 70 sq. ft. would be luxury itself compared to the conditions under which the Russian children were working so hard, and would provide a much pleasanter and quieter place to work in than the family

¹ "Design of Dwellings", p. 13.

living-room. The cost of supplying heat to the bedrooms would amount to a capital charge of not more than £2 or £3 on the house, and a running cost not exceeding a very few pence each week in the winter.

Suitable furniture would have to be made available at low prices. The divan bed, which looks like a sofa in the daytime, is already beginning to replace the old iron framework with brass knobs at the top. Here is an opportunity for the Board of Trade to extend the good work they have been doing on utility furniture to a new field. Exhibitions all over the country of well-designed utility furniture for the furnishing of bed-sitting rooms would do much to popularise the idea.

Another thing that is necessary is an educational campaign. The working classes have not learnt the value of the bed-sitting room for their children; if they had, the rooms could very often be used even as now equipped. The failure to do so is a curious example of British conservatism. The Ministry of Health should press this reform on all local authorities; they in their turn should instruct their housing managers to urge on tenants who have children the immense advantages of helping and encouraging them to use their bedrooms as private studies.

It is constantly asserted that we intend the children of the lower-income classes to have opportunities for education equal to those of the other classes. This claim is sheer hypocrisy unless we provide them with a place where they can work quietly and undisturbed in their own homes. I believe this to be a reform which is almost unique; it would have an exceedingly important effect in giving educational opportunity to the young and it would cost almost nothing to introduce.

CHAPTER XV

COSTS, RENTS AND SUBSIDIES

THE FUNDAMENTAL DIFFICULTY of rehousing slum-dwellers in houses of the Dudley standard is, of course, financial. As the *Economist*¹ has put it:

“The problem is one of the relation between working-class incomes and the cost of housing, whether in the form of rents or purchase instalments. The real reason why many working-class families were poorly housed before the war is simply that they did not possess the resources to command better accom-

¹ July 29th, 1944, p. 153.

modation or, more precisely, that they could only have spent more on housing by stinting themselves of food, clothing and other necessities and amenities. . . . The argument that the working classes would have been better housed if they had been disposed to spend a bigger proportion of their incomes on housing merely begs the question. It is the consensus of medical opinion that the consumption of food and, to a lesser extent, of clothing was also below modern minimum standards."

The question we have to consider is, therefore, what subsidies will be necessary to enable all slum-dwellers to live in houses up to the inter-war standard without an undue burden on their incomes. There are three items which are decisive in determining the level of rents: the cost of the house, the rate of interest, and the rates. As regards the first two, there have during the last generation been immense variations in both. The cost of the inter-war standard house, excluding land, was as follows at various dates:

1914	.	.	.	.	£250
1920	.	.	.	.	1,000
1935	.	.	.	.	350

The rate of interest which local authorities had to pay was 6% in 1920; in the thirties 3%.

The combined result of the high cost and the high rate of interest in 1920 on the one hand, and the low cost and low rate of interest in 1935 on the other, is startling, as shown by the following table:

Year.	Cost of house.	Rate of interest.	Annual interest charge	Weekly interest charge.	
	£	%	£	s.	d.
1920 . . .	1,000	6	60	23	0
1935 . . .	400	3	12	4	7

As against 1935, the capital cost was two and a half times as high in 1920 and the interest twice as high; the annual interest charge was therefore five times as high. On the 1920 basis, the slum problem is insoluble; on the 1935 basis, it would be comparatively easy.

Let us proceed to consider the prospective post-war position as regards costs, interest, and rates.

COSTS

The Dudley Committee¹ has recommended increasing the cost of the standard inter-war house, as actually built for slum-clearance purposes in the thirties, by 40%. It is interesting evidence of the state of mind which prevails in 1944 that this is generally regarded in the Press as being a rather timid recommendation!!

The cost of the ordinary brick house is estimated to be made up as follows:

- 40% labour;
- 54% materials and components brought on to the site;
- 6% overheads.

How far is there a chance of reducing these different costs?

Labour.

As regards labour, the question of output under full employment has already been discussed.² It is impossible to forecast what the output of labour will be; in the emergency period it will undoubtedly be low; it seems reasonable to hope that in a few years it may settle down to the same level as prevailed during the thirties. The chief economy to be expected is a reduction of site labour by an increase of pre-fabrication and mass production.

Materials.

There is on the one hand the danger of rings, which may increase the cost of materials;³ on the other hand, there should be economies owing to increased production and a guaranteed market. According to the report on "Methods of Building in the U.S.A."⁴ the costs of materials in the United States are, in relation to the cost of living, so low that there would seem to be much room for improvement in this country.

Components.

It is on the components or fittings of the house that great reductions are undoubtedly possible. It has been pointed out elsewhere⁵ that if materials prices are reasonable and if full advantage is taken of modern methods of pre-fabrication, mass production and mass sales, there might ultimately be an economy of £100 on the cost of a Dudley house.

¹ Chapter XIV, p. 98.

² See Chapter V, p. 39.

³ See Chapter IV, p. 37.

⁴ See Chapter IV, p. 38.

⁵ See Chapter VIII, p. 58.

RATE OF INTEREST

The most important single factor in determining the rent of houses is the rate of interest which has to be paid on the capital. This is exceedingly well brought out by the following quotation from "The Seven Myths of Housing", by Nathan Straus:

"The general impression prevails that private enterprise cannot produce low rent dwellings, first because of the high pay demanded by labour and second because building materials cost too much owing to artificial price restrictions. A test made in almost any group of people will reveal that when the subject of high rents is brought up, the comment evoked, almost as an automatic reflex, is that wages in the building trades are too high. A few may comment unfavourably on the sins of the manufacturers of building material. Rarely will the chief factor in the annual cost of new housing--the cost of capital--be mentioned at all. Yet in the order of importance, cost of capital comes first, cost of building materials is next, and the cost of building labor is a comparatively small factor. The wage question should come last, not first, in a rational analysis of housing costs.

"If the wages paid to labor employed on the site in construction of a housing project were cut in half, the annual cost of the housing produced would be reduced by only about 10%. If the cost of materials entering into the production of the housing were cut in half, the annual cost would be reduced by only about 15%. But a reduction in financial charges--interest and amortization--by half, would effect a greater reduction in annual cost than cutting in half the costs of both materials and labor."

If similar figures for England are worked out, we get the following result:¹

If the cost of labour is doubled the net rent is increased	
by	28%
If the cost of materials is doubled the net rent is in-	
creased by	37%
If the rate of interest is doubled the net rent is increased	
by	70%

¹ This result depends on the figures already given, that the cost of the house consists of 40% labour, 54% materials and 6% overheads, and that the net economic rent of £20 per annum is made up of £14 for interest and sinking fund and £6 for management, etc.

It is clear that the rate of interest outweighs in its effect on rent all the other items added together. The Treasury has been remarkably successful in maintaining the long-term rate of interest at about 3% throughout the war. It is vital to the housing programme that it should not be allowed to increase in the post-war years. If it should be possible gradually to bring it down to, say, 2%, that would be an immense step towards rendering easier the final completion of a satisfactory housing programme.

There can be no doubt whatever that the prevention of any increase in the rate of interest, and if possible a progressive reduction, is the most important single service the Government can render towards ensuring the success of the housing programme.

RATES

In an average Manchester slum house the tenant pays about 2s. 6d. a week in rates. If he moves out to a Dudley house he will have to pay about 6s. 3d., roughly speaking, an additional 4s. a week. The burden on the rates of the services required by him and his family in a Dudley house is probably not more than in the slum house. He moves to the Dudley house because the country is of opinion that that is the minimum house in which his children can be properly brought up. When the move is made on a voluntary basis, it means that a man who sacrifices himself to pay an extra rent of, say, 5s. a week for the sake of his children, instead of being rewarded by a grateful country, is fined 4s. a week in extra rates for his praiseworthy action. The rates of a Dudley house for a labourer may easily be over 10% of his income, whereas a rich man living in a large house will often not pay as much as 1% of his income in rates. Surely no other tax existing in this country even approaches in harshness and injustice this tax on a poor father of a large family of 10% of his income for rates alone, levied just because he is making special sacrifices to bring up his children in good conditions.

Some years ago I suggested¹ that a uniform rate should be levied on all houses up to the minimum standard which was regarded by the Government as providing adequate accommodation for a family. This rate should be something less than sufficient to cover the actual cost to the local authority of the services required by the house and family, say, perhaps 2s. or 2s. 6d., when the rates are at an average level in a great city. This would mean after the war that the rates of any slum house and of any house up to the Dudley level in any town would be a fixed amount of something between 2s. and 2s. 6d. Such a reform would do

¹ "How to Abolish the Slums" (Longmans, Green & Co.), 1929, pp. 84-88.

much to decrease the injustice of the rating system, and to facilitate the transfer of slum-dwellers to new houses.

The system of raising the main income of local authorities by rates has many practical advantages, and in spite of its manifest injustice probably cannot be swept away; in any case, there is not the least prospect of anything of the sort happening in the next twenty years. But all kinds of things are wrong with the rating system which could easily be modified.¹ It is high time for a Royal Commission on rating and valuation; and the terms of reference should instruct the Royal Commission particularly to consider the modification of the system in regard to the excessive burden which it imposes on the poor tenant with a large family.²

SUBSIDIES

The best, and indeed the only, basis on which an estimate can be made of the subsidies that are likely to be necessary for slum-clearance purposes is by considering what happened in connection with the 250,000 houses that were built under the 1930 Greenwood Housing Act during the thirties. It will be seen from Table VI (p. 256) that the standard inter-war house cost £400, that the net rent was 8s., and that the rates amounted to 4s., giving a gross rent of 12s. The subsidy was calculated on a rather complicated basis and differently administered by different local authorities, but the essential thing is that it averaged 6s. a week. It will be remembered that, roughly speaking, under the Greenwood Act all the people from a slum-clearance area were rehoused. The tenants, therefore, were not specially selected people but were an average cross-section of the whole of the residents in clearance areas. The amount of the subsidy required was fixed by the Labour Government in 1930 at the average rate of 6s. a week; this same rate was maintained by Conservative governments for eight years thereafter, and it may therefore be assumed to have been the lowest practicable subsidy for the rehousing of slum-dwellers in standard inter-war houses. This meant that the total weekly payment made by the tenant for rent and rates was 6s. That was all the average tenant was judged by successive governments to be able to afford.

What is the tenant likely to be able to pay after the war? Assuming that building costs, and also the income and expenses of the average tenant, will be 30% above inter-war, then it would

¹ For the unsatisfactory state of the rating system as regards planning areas see Chapter XXVIII, p. 208.

² See "Local Rates and Post-War Housing", by Shena D. Simon (Dent & Sons).

follow that as against 6s. in inter-war days the tenant would be able to afford 8s. after the war. Table VI shows that in that case the subsidy required would be 10s. 9d. a week, or £28 per annum. If we are right in our assumption that there are four million slum houses to be cleared in the next sixteen years, then this means a total subsidy for slum clearance alone of something over £100 million per annum. In addition to this, there will be whatever subsidy is required for the one and a half million additional houses which should be built in the first five years. Many of these will be built at high costs, and high subsidies will therefore be required. On the other hand, a considerable proportion of them are likely to be built for the higher-income classes without subsidy. It may be hoped that the total subsidy required for these one and a half million houses will be comparatively small, and that our rough estimate of £100 million over sixteen years may be regarded as including this figure.

Everything depends on building costs and the rate of interest. Table VII (p. 256) shows that if a house costs £1,000 and if the rate of interest is 6%, the annual charge for interest and sinking fund would be £65, as against £21 for the £600 house at 3%. Such figures would certainly kill the whole housing programme.

The only possibilities of substantially reducing the total estimated figure of £100 million per annum for subsidies, on the assumption that costs and incomes will be 30% above 1939, would seem to be as follows:

(a) The cost of £700 may be regarded as excessive, and might be reduced to £600. In the early days this would mean cutting out some of the Dudley improvements. Later on it may be hoped that the result could be obtained by economies through cheaper materials, pre-fabrication and mass production.

(b) A reduction in the rate of interest to 2% would mean a big saving.

(c) The rating system should be reformed to reduce the burden on the minimum standard house.

(d) If national prosperity increases, the tenants should be able to afford larger rents, and in that case smaller subsidies would suffice. But, of course, if national prosperity decreases larger subsidies would be necessary.

The whole estimate is not much more than an intelligent guess, but taking everything into consideration, the conclusion seems inescapable that, to build one and a half million additional houses and then a further four million houses of the Dudley standard and

to move four million slum-families either into Dudley houses or into existing inter-war houses, is likely to mean a total annual burden on the Exchequer for subsidies amounting to something in the region of £100 million.

CHAPTER XVI

PRIVATE ENTERPRISE OR LOCAL AUTHORITY BUILDING

IN THE INTER-WAR years the building of houses was divided between the speculative builder and local authorities on lines which, in the later years, were pretty clearly defined. Local authority building was practically confined to providing accommodation for families from slums or overcrowded conditions who could not pay the rent of a standard inter-war house except with the help of a subsidy. Local authorities were directed by the 1936 Act in allocating houses to give a reasonable preference to "persons who are occupying insanitary or overcrowded houses, have large families, or are living under unsatisfactory housing conditions". Only where private enterprise was not meeting the general needs of a particular district were local authorities authorised to build without subsidy for that purpose. Under these conditions local authorities built in the last quinquennium before World War II an annual average of 89,000 houses.

The whole field of building houses for those who could afford an economic price or rent was left to the speculative builder. Boom conditions¹ in housing prevailed throughout the thirties; the demand seemed insatiable; millions of families were able and willing to afford the price or rent for a good house. As a result of these conditions, speculative builders built an average in the last quinquennium of no less than 272,000 houses per annum.

To sum up, the speculative builders built 70% of all the houses in the inter-war years, local authorities 30%. Broadly, the local authorities built working-class houses to let, private enterprise built larger houses for sale.

The demand for houses after the war will be very different from that in the inter-war years. The very large numbers of houses built in those years for the relatively well-to-do classes has certainly gone far to meet the demand. The reasons for the relative failure of the slum-clearance campaign in the inter-war years was that really large scale housing was left to the speculative builder who housed the well-to-do and ignored the slum-dweller.

¹ See Chapter XI, p. 79.

While there was a great increase in the total number of the larger houses, there was a relatively small increase in the number of houses built within the means of the poor large family. There can be no doubt that public opinion is now determined that the housing of those whose need is greatest shall have the first place.

The total demand over the next twenty years, if the Government's twelve-year programme is carried out and continued, has been estimated to be as follows:

- 1½ million additional houses;
- 4 million houses to replace slum houses;
- 1½ million houses to replace larger obsolescent houses.

If the inter-war division of functions is maintained, the numbers under each of these headings built by local authorities and speculative builders respectively will be as follows:

Categories of houses.	Number required.	Local Authorities.	Speculative builders.
Additional	1,500,000	750,000	750,000
Slum replacement	4,000,000	4,000,000	—
Replacement of larger obsolescent houses	1,500,000	750,000	750,000
Totals	7,000,000	5,500,000	1,500,000

We have estimated that both the first million and a half houses and the last one and a half million will be divided equally between the local authorities and the speculative builders. This seems a reasonable assumption though it may be modified in various ways. The important point is that slum-clearance houses were all built in the inter-war years by local authorities. The local authorities would on the above basis build more than three-quarters of the whole of the houses, leaving less than one-quarter for the speculative builder.

Is this the right solution, or would it be too big a burden for the local authorities? Should the speculative builder be called in to help with slum clearance? This is a question of major importance. There is some doubt whether the speculative builder would be willing to enter this difficult field on a substantial scale; but, assuming that he were willing, the question we propose to consider is to what extent it would be to the national advantage to encourage the speculative builder to take a share in this work, rather than leaving it to the local authorities as in inter-war days.

SPECULATIVE BUILDER OR LOCAL AUTHORITY?

An analysis of what is required in providing houses for slum-dwellers shows that there are eight principal aspects under which the relative advantages of private enterprise and local authority building can be compared.

1. *Quality*

The gravest objection to building by speculative builders in the inter-war period was, of course, the bad building by a limited number of jerry-builders, which affected the reputation of all speculative building. Can this major defect be prevented?

As a result of a lead given by some of the building societies, a Charter has been produced making certain proposals for the voluntary control of the quality of houses built by the speculative builder. The proposals embodied in the Charter are in many ways excellent; their chief defect is that they are on a voluntary basis. This matter is fully examined in Appendix II (p. 235). There are two conclusions; firstly, that so long as the scheme is on a voluntary basis, it will leave the worst jerry-builders just as uncontrolled as regards the quality of the houses as they were in the inter-war period, and that therefore good standards of building must be made compulsory by legislation; and secondly, that the control of the inspection and certification of the quality of houses should be in the hands of the county boroughs and county councils.

As regards local authority houses, this question of quality does not arise. The quality of local authority houses in the inter-war period was satisfactory. The authorities knew that they would have to own and manage the houses, they had no profit incentive which would tend to make them wish to cut the price. On the contrary, the natural incentive would be to make quite sure the houses were well enough built so as to avoid heavy repair bills later.

2. *Cost*

Both local authority and speculative builder houses are built by private enterprise. Local authorities advertise their contracts, and place the order with the lowest tender which complies with their conditions and which is offered by a competent and honest builder. This is universally regarded as the best way of obtaining good and cheap building. It may be assumed, therefore, that local authority houses certainly cost no more for the same article than the speculative builder's houses.

In this matter, local authority housing is likely to present one

advantage from the national point of view, in that it should be possible for the Government to secure large-scale mass production, and accordingly great economies in the production of components of the house, by insisting on the use by local authorities of the mass-produced article, and in this way to create so large a demand for standardised articles as to render effective mass production possible. It would not be possible for the Government to insist on the use by the speculative builder of standardised articles.

3. Building to Let

It is, of course, essential that all slum-clearance houses should be built for letting. Certain speculative builders did build substantial numbers of houses for letting in the later years of the inter-war period. But it is a more difficult and risky business than building houses to sell; the builder had himself to find a sum of at least 10% of the value of the house, which in the case of houses for sale is found by the purchaser. As a result, few speculative builders have had any interest or desire to be associated with this kind of business, which they have regarded as somewhat outside their province. And it is generally felt that building houses to let by speculative builders is not likely to develop on a large scale so long as they are compelled to find the capital and take the risk of this last 10%. The question has been raised whether building societies could under proper conditions advance the whole of the capital required to enable speculative builders to build houses to let without any permanent investment of their own capital. But this would mean the building societies taking an increased risk, which many people think would shake the confidence of the public and would not be compatible with their position as bankers.

In spite of these difficulties, leading members of building societies have announced that they hope to be able to arrange to lend money on terms acceptable to builders at a low rate of interest, say about 4%, for building houses to let. Legislation would be required to enable building societies to adapt their lending arrangements for this purpose; possibly they might be allowed to invest a proportion of their funds up to a certain maximum in this way. If the building societies could take action on these lines it would be an important step towards enabling the speculative builder to enter this field on a larger scale.

4. Low Rents

Local authorities in the inter-war period were able to borrow at a rate of interest from 1% to 2% lower than the speculative

builder. Even if the building societies are willing to cut the rate for houses to let, it is probable that local authorities will still have an advantage of at least 1%, which means over 2s. a week on the rent of a house costing £600.

5. *Selection of Tenants*

The speculative builder when building houses to let naturally tries to get the best tenants from the point of view of profit, that is to say, tenants with a good income and few children. The local authorities, on the other hand, have taken those families whose need was greatest, that is, the poorer families with the larger number of children. If the speculative builder is to come into slum-clearance work, he would have to take a class of tenant hitherto housed only by the local authorities; indeed, it would be necessary for him, in order to carry through slum-clearance work in an orderly way, to take his tenants from local authority lists.

Would many speculative builders be willing to undertake this task of managing estates to house poor large families from the slums? The local authorities are gradually learning the technique of disinfection and re-education of the transferred families. How could the speculative builder tackle these problems?

6. *Subsidies*

This is a key question: are subsidies to be given to the speculative builder? Taxpayers and ratepayers have been willing to accept the burden of subsidies in order to house the slum-dweller, certainly not in order to increase the profits of the speculative builder. But it is very difficult to ensure that some of the subsidy shall not go into the pocket of the speculative builder; the attempt to do this was not always successful in the inter-war period. There is a strong feeling that subsidies to the speculative builder are undesirable except in very special circumstances.¹

7. *Planning*

A definite advantage of local authority building is that the authorities are likely to build their post-war houses in properly planned neighbourhood units. This matter has been dealt with elsewhere;² there is now general agreement that all urban post-war housing ought to be planned in neighbourhood units and that the local authority must have full control of the type and size and

¹ The Minister of Health has announced that subsidies are to be given to private enterprise on the same terms and for the same purposes as to local authorities. This is confined to the emergency period. The results should be carefully watched.

² See Chapter XXVII (p. 188).

location of all the houses large or small in order to make a success of the unit. It is important for this purpose that the local authorities should not only themselves build the smaller houses, but that they should also themselves have the right to build the larger houses and other necessary buildings so as to be able to ensure that they are erected at the proper time, if and when private enterprise fails to provide them. The development of neighbourhood units on the lines recommended in the Dudley Report is quite outside the possible field even of the largest speculative builder.

8. *Timing*

Finally, there is another important advantage of local authority building. It has been pointed out¹ that the volume of orders placed by private enterprise in the building industry varies within wide limits from time to time. For full employment it is essential to secure a steady level of orders, and this can only be done by the placing of public orders on a sufficiently large scale, varying in inverse ratio to the private orders, so that the total volume of public and private orders shall remain constant. Since local authority housing is the only form of public works which can in fact be varied on a large scale to suit the needs of the industry as a whole, it is suggested that the Government should be in a position to increase or decrease the total local authority building by 100,000 houses per annum. This is a strong argument for the largest possible proportion of houses being built by the local authorities; the larger the proportion left to private enterprise, the greater the difficulty in securing steady employment in the building industry.

Every one of the eight headings we have considered provides an argument in favour of the building and management of houses for tenants from the slums by the local authority. There seems to be no single argument in favour of the speculative builder.

HOUSING ASSOCIATIONS²

There is, however, another form of private enterprise which might render great service in connection with slum clearance. Housing associations are non-profit-making organisations promoted by private individuals or firms or groups to build houses for letting or for sale. Being non-profit-making, they have been

¹ See Chapter III, p. 32.

² The officially recognised central association of housing associations is the National Federation of Housing Societies, 13 Suffolk Street, Pall Mall, London, S.W. 1. Secretary, Mr. Reginald Browne.

entitled to the same subsidies as local authorities. They are often promoted and managed by public-spirited persons and some very valuable work has been done, both in the design of estates and in methods of letting and management. Many of the associations have specialised on housing the poor large family and have been very successful; indeed it is fair to say that many housing associations make a point of paying as much attention to the social and welfare needs of the tenants as they do to seeing that sound and well-designed properties are provided. Much of their success in these directions is due to management, generally by trained women house-property managers; much, too, results from the policy of inspiring interest on the part of the tenant by setting up tenant committees of various kinds.

One disadvantage from which housing associations suffer is that they have not always had the benefit of the subsidy from rates. This factor, combined with the fact that they have to pay a rather higher rate of interest than the local authorities, makes it difficult for them to be fully competitive with local authorities. It is to be hoped that local authorities will in future be ready to give the same subsidy from the rates to approved housing associations as they do to their own houses.

The only serious weakness of housing associations is that they have hitherto been on a relatively small scale. All the housing associations taken together built just under 50,000 houses in the inter-war years. If housing associations could be developed on a large scale, this would be an important way of bringing private enterprise into a new field. The building societies are the only bodies which have the necessary funds and which are at all likely to tackle this matter effectively. It has been suggested by some of the leading directors of building societies that they should be authorised¹ to form non-profit-making organisations, functioning on the lines of housing associations, so that these organisations could assume the full responsibilities of a landlord. They would buy and lay out estates, and employ good architects, planners and engineers to design the estates and the individual houses. They would then either let contracts for the houses to private enterprise or would let plots to speculative builders to erect on their own responsibility houses of approved design.

The housing association would remain owner of the estate and would manage it. Some of the houses might be let and some might be sold on lease, reverting to the association, say, in ninety-nine years. The association being non-profit-making, all profits would go in the reduction of rents or in improved common services to the tenants and owners on the estate.

¹ This would require legislation.

If we go through the list of the eight reasons why the speculative builder is not suitable for dealing with slum clearance, the result with the housing association is very different. None of these reasons tells in favour of the local authority against the housing association except the single important one that the local authority is likely to be able to borrow money at least 1% cheaper than the housing association. As against this, the housing association is in many ways freer than the local authority. If directed by a vigorous and imaginative board, with the full monopoly powers of the large private landlord, these associations might well develop fine estates, both in country and in town, following the example of the great landlords of the past in Bath, Buxton and Edinburgh, or more modern examples like the Baldwin Hills estate in Los Angeles,¹ or they might even promote complete garden cities like Welwyn and Letchworth.

Here is a splendid opportunity for the great building societies to develop their business on a large scale, and to show the local authorities what private enterprise can do.

CONCLUSION

Taking everything into consideration, it seems probable that from the time when the man-power in the building industry reaches the level of one and a quarter million, it would be in the national interest that local authorities should be prepared on the average to build 250,000 houses a year, to increase this when private enterprise building falls off to 350,000, and to decrease it in boom times to 150,000.

POSTSCRIPT: THE POLE REPORT

The foregoing was written before the Pole Report² appeared. The Committee was set up by the Ministry of Health "to consider the part that private enterprise can best play in post-war housing". It is clear from the report that the Committee assumed it to be their business to consider the conditions under which the speculative builder would be likely to be able to build the largest number of houses in the post-war period. This problem is examined in detail and many proposals are made as to the best ways of securing this end. The Committee throughout use the phrase "private enterprise" as meaning the speculative builder. They mention housing associations, some of which have done such valuable pioneering work, but make no recommendations for helping them.

¹ See Chapter XI, p. 75.

² "Private Enterprise Housing", issued by the Ministry of Health, 1944.

QUALITY

The vital question of the quality of the speculative builder's work is separately considered by a sub-committee, whose conclusions are endorsed by the main committee. They recommend that quality should be certified by the National House-Builders' Registration Council and consider at some length whether this should be on a voluntary or compulsory basis.¹ They say, "The weight of the evidence is in favour of some compulsory scheme for controlling the standard of all house-building", and add, "No evidence has been submitted to us that it would be impracticable to make the Registration Council's scheme compulsory". They then proceed to point out the difficulties of a compulsory scheme. They say, "A compulsory scheme means the creation of a vast administrative machine" and they reject it largely on this ground. But the compulsory inspection of aeroplanes during the war involved a far vaster administrative machine. Up to 10% or even more of the labour in an aeroplane factory is engaged on inspection; the cost of inspection proposed by the National House Builders' Registration Council is a half of 1%. It probably ought to be more; many people think that five inspections during the course of the erection of a house is quite inadequate to ensure good building. So that the vast administrative machine of which the Pole Committee are so frightened is, taking into consideration the scale of aeroplane building, perhaps one-fiftieth of the size of the organisation for inspecting aeroplanes which exists to-day!

Surely the quality of houses in peace-time is as important as the quality of aeroplanes in war-time? In any case, if a compulsory scheme is undesirable because of the need for setting up a "vast administrative machine", it is quite clear that a voluntary scheme, if it becomes generally effective, would be just as vast and just as expensive. The argument that the country or the house-owners cannot afford the cost of inspection is preposterous nonsense.²

THE FIELD FOR PRIVATE ENTERPRISE

The Pole Report does not attempt to examine the question as to the proper division of the field of housing between private

¹ See Appendix II (p. 235).

² Since this was written the Government has accepted the proposals of the Pole Report for "the development of a scheme on the lines of the National House Builders Registration Council for securing the maintenance of good standards of building." We can only hope that this new principle of maintaining standards which are held to be essential in the public interest by means of voluntary inspection may succeed better than seems likely. Also that this system will not be extended to the Factory Acts!

enterprise and the local authorities. It gives practically no consideration to any of the eight reasons dealt with in this chapter, all of which favour local authority as against speculative builder building for slum-clearance purposes. It quite simply assumes all through that it is to the national advantage that the speculative builder should build the maximum number of houses.

As regards the emergency period, the Government has announced that it hopes that 300,000 houses will be built or begun during the two years after the armistice. The Pole Committee "consider that private enterprise should be encouraged to participate in this short-term programme" in order to give "an opportunity for builders to get their organisations into order and fit them for the greater tasks which lie ahead". For this purpose they recommend that a subsidy should be made available on the same terms as it is given to local authorities "when the two agencies are meeting the same needs". It is well known that a certain proportion of the housing subsidies granted in the inter-war years went into profits for the speculative builder. This is a difficult thing to prevent, and the Pole Committee make no constructive suggestion whatever as to prevention, although they admit that the subsidy "must be subject to some measure of control of selling price or rents and of standards of size and construction".¹

They state that of the inadequate supplies of labour and material that will be available during the first two years "a disproportionate share must not be absorbed in the construction of very large houses of a luxury type". This is quite shocking. The housing shortage for returned ex-Service men and others will be desperate in the first two years: everybody has assumed that all possible energies should be devoted to building standard houses, or indeed temporary houses of the pre-fabricated type which in the long run would be regarded as sub-standard, in order to meet this very serious situation as rapidly as possible. And yet the Pole Committee have the audacity to suggest that a certain proportion of these scarce materials should be devoted to "very large houses of a luxury type".

A study of the report forces one to the conclusion that the Committee have not attempted to weigh the relative merits and the proper fields in the national interest for private enterprise and local authority building respectively. The report must be regarded as a statement of the case for the speculative builder and of the methods by which he can be helped. For instance, the

¹ The Government has announced its acceptance of the recommendation for a subsidy to private enterprise during the early post-war years, subject to certain conditions.

Committee always use the phrase "private enterprise" when they mean the speculative builder who works for profit; thus implying throughout that the speculative builder shows more enterprise than other people. The Committee say nothing of the enterprise shown by those who, out of public spirit and not for profit, founded the many housing associations or Welwyn Garden City; nor of the enterprise shown by many local authorities in connection with the building and management of houses for the most difficult types of tenant, with whom they were forced to deal. It would be difficult to find any imaginative enterprise on the part of speculative builders in the inter-war period comparable to what was done by the Manchester and Liverpool City Councils at Wythenshawe and at Speke.

It seems a pity that the Ministry of Health did not appoint a committee to report on local authority housing to counter-balance the Pole report on private enterprise housing. Or it might have been even better to appoint one committee to investigate the whole question and to try to present a balanced report as to the relative fields of housing in which private enterprise and local authorities are likely to be best able to serve the national interest. On these broad and long-term questions of national policy it is to be hoped that the Pole report will be ignored.

PART III

PLANNING: FOREIGN EXAMPLES

"The aim of town and country planning is so to plan the use of all land as to meet the essential economic and social needs of the population in the most efficient manner possible, and thus to give to all the best possible environment in which to live and work and have their being."—R. L. REISS.

CHAPTER XVII

THE FIVE ESSENTIALS

FOR EFFECTIVE TOWN and country planning five conditions are fundamental:

1. *The Planning Authorities*

(a) There must be suitable national, regional and local planning authorities.

(b) The national authority must have wide powers both of initiation and of control.

(c) The local authorities, which must be responsible for making the plans in their area, must have adequate powers and operate over suitable areas.

(d) The regional authorities must co-ordinate the work of the local authorities in suitably defined regions. The respective powers of regional and local authorities must be clearly defined.

(e) All these authorities must have adequate staffs, for research, planning and administration.

2. All *land* must be made available for the purposes considered best in the public interest by the planning authorities. No individual or sectional interest must be allowed to withstand the judgment of the planning authority.

Purchase. The planning authority should be in a position to purchase compulsorily and quickly whatever land it considers necessary at reasonable prices.

Compensation. Payments for compensation for interference with the rights of landlords should be assessed on a reasonable basis. So far as practicable they should be met by receipts from better-

ment, but subsidies from the central government must be available on a large scale if the local authorities are to be enabled to plan on bold and imaginative lines.

3. *Finance*

(a) Adequate income must be available to all planning authorities to meet their annual expenditure.

(b) Adequate capital must be available from national or local funds for the purchase of land (for instance, national parks, green belts, open spaces, etc.) and, so far as necessary, for the payment of compensation.

(c) Where the national government has a monopoly of the high-yielding sources of taxation at its disposal, as in Britain and the United States, grants and subsidies must be paid by the national government to enable local authorities to plan and develop along the best lines.

(d) Planning authorities must be able to borrow freely at low rates of interest.

4. The next essential is a *plan*, or rather a series of plans; the national authority must lay down the general policy as to the location of industry and population, the degree of decentralisation, action as regards depressed areas, principles of zoning, national transport and park systems, and so on.

The local planning authorities must make the detailed plans to suit their local conditions in accordance with national policy.

The regional authorities must co-ordinate the local plans for the region and make comprehensive regional plans, based on and in co-operation with the local authorities.

5. *Drive*

This is the most fundamental of the five conditions; all the others depend on it. How far do the people demand planning? How far are they ready themselves to make the necessary sacrifices as taxpayers and ratepayers and to insist on the overriding of sectional opposition? No democratic government can act effectively without the strong and persistent driving force of public opinion.



Top right: Housing Dept. Manchester Corporation

A typical Manchester backview



Wythenshawe Housing, Dept. Manchester Corporation

Wythenshawe — Manchester's satellite garden town



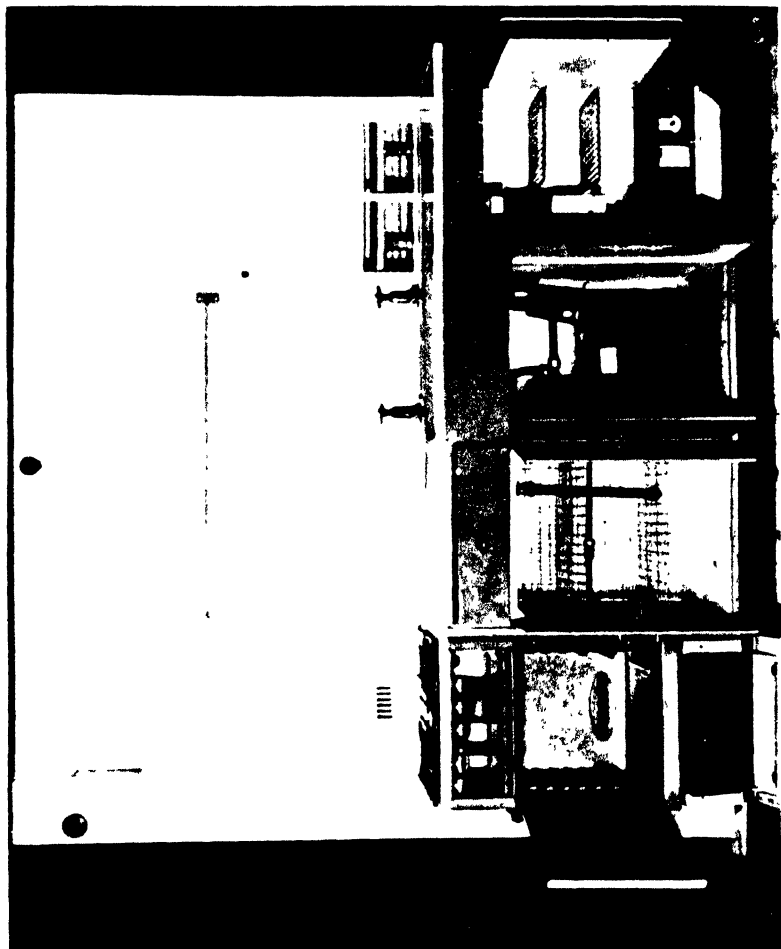
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Wythenshawe - showing housing types and architecture



Manchester Record

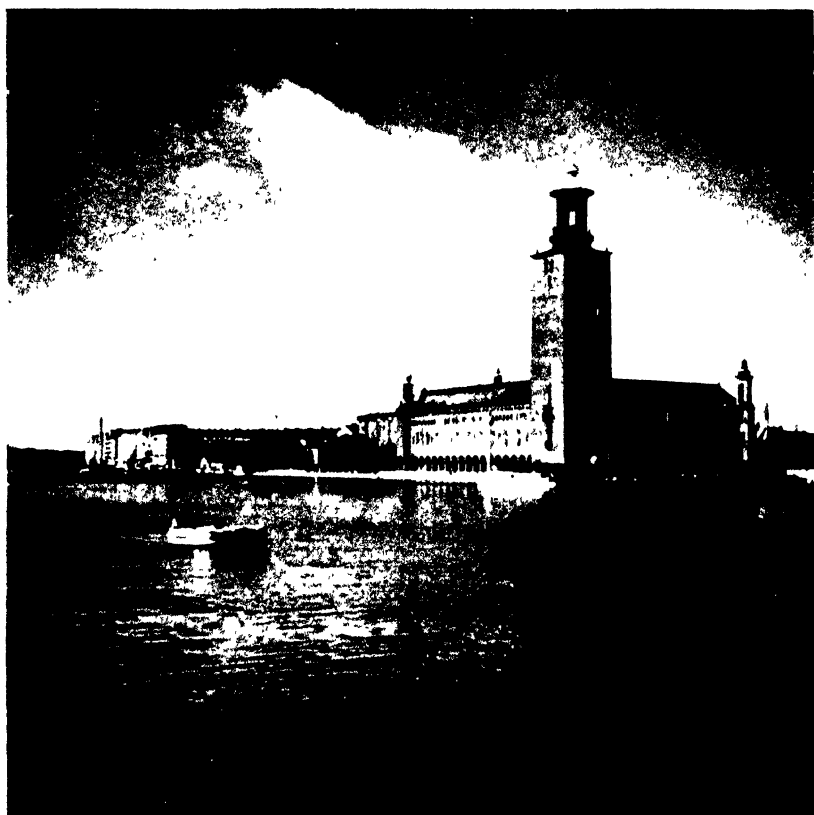
The beginning of Manchester Civic Centre, showing the Municipal Library and Town Hall Extension



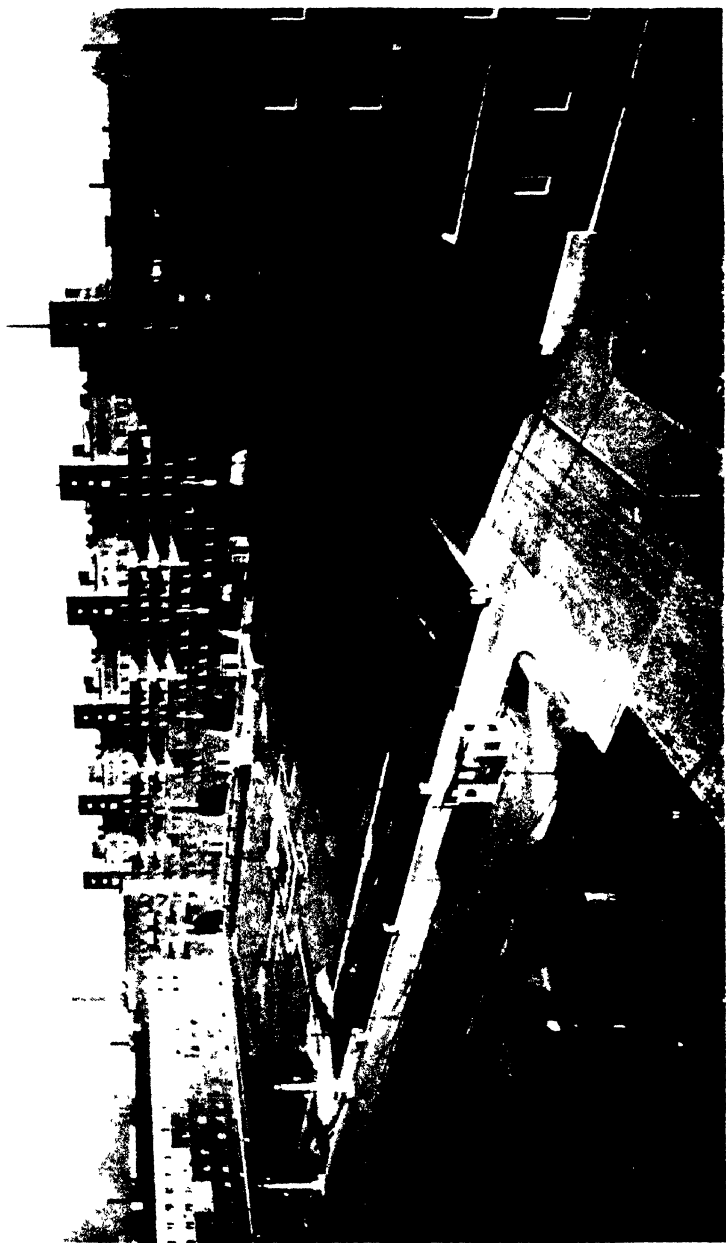
The pre-fabricated kitchen unit in the Portal house



The Roof Pool on the Sidney Street Estate Flats, St Pancras, London



Stockholm Town Hall



Vienna Municipal housing



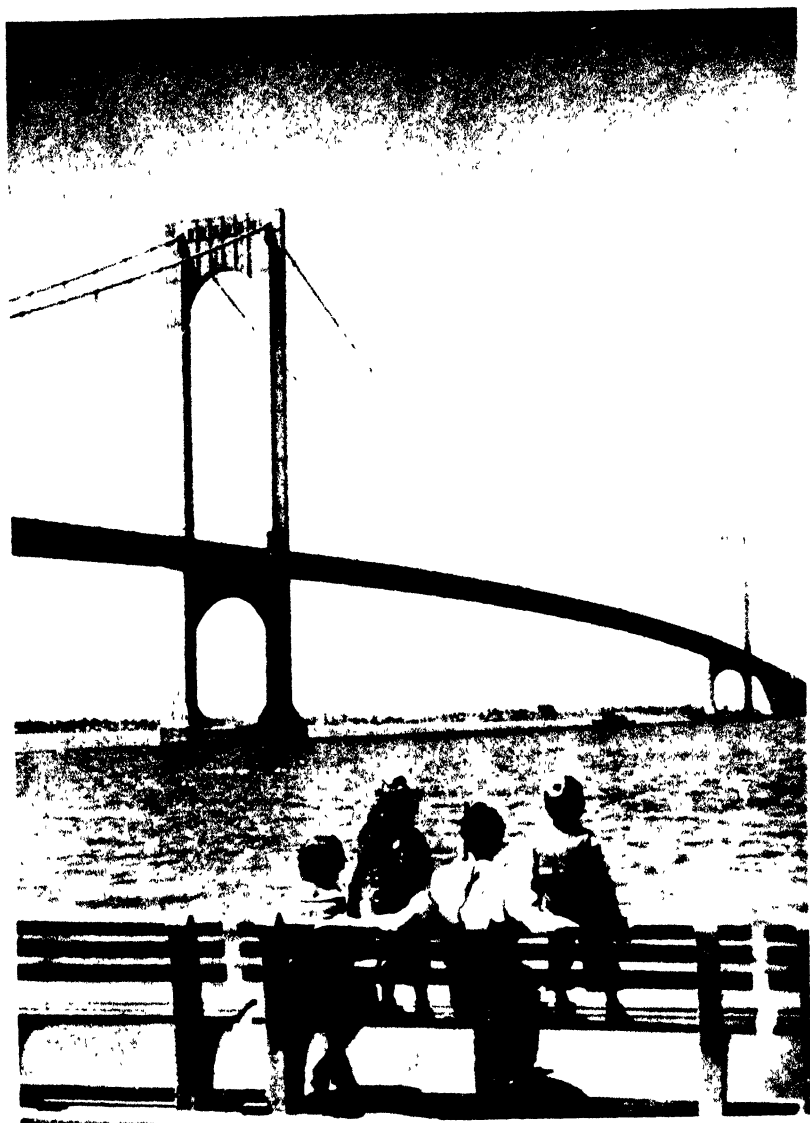
Moscow General view of the Kremlin



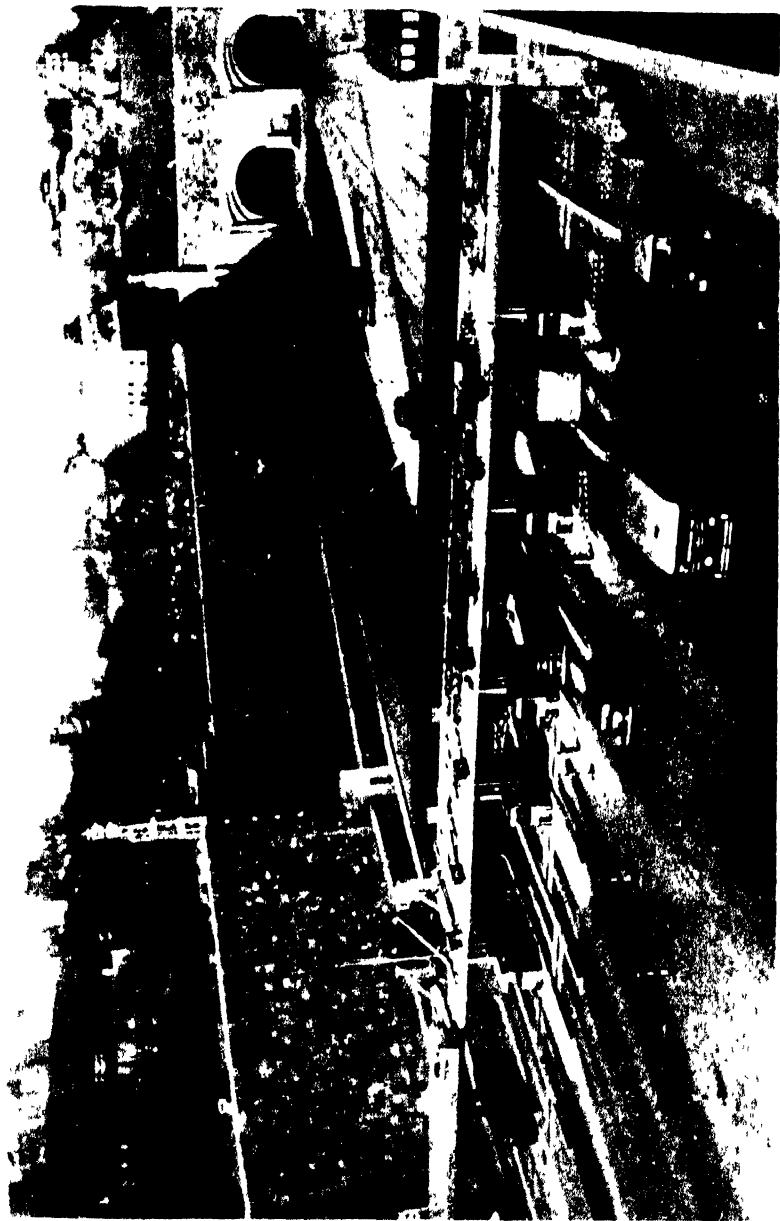
New York City Traffic separation on the Henry Hudson Parkway



New York City : General view of Last River Drive



New York City — The Bronx-Whitestone Bridge



New York City The New Jersey end of the Lincoln Tunnel, under the Hudson River



Los Angeles: The City Hall



Chicago: Union Station



Chicago: North Avenue, showing rising curb for separating traffic at differing peak periods

CHAPTER XVIII

MOSCOW

THE PLANNER'S PARADISE

I VISITED MOSCOW in 1936 to study the ten-year plan for the reconstruction of Moscow, which had been adopted in 1931.¹ What is the position in Moscow regarding the five essentials of planning?

THE MOSSOVIET

The planning authority is the Mossoviet, which works directly under the central government. Moscow is fortunate from the planning point of view in being separate from other cities, so that the Mossoviet combines in itself the duties which would commonly be divided between a regional and a local authority. The Mossoviet controls not only the city, covering an area of 150,000 acres, but also a forest belt, so that the total radius of the area controlled by the Mossoviet is about 14 miles. In the early days leading architects and planners from several countries (including Corbusier) had been called in to advise on the plan, but in 1936 all the planners, engineers and architects were Russian. I met most of the leaders; all of them were anxious to explain what they were doing. They told me that they had the full support of the Mossoviet and of the national government, which gave them a very free hand; they felt they had a splendid opportunity of planning the finest great capital the world had ever known. I never met a keener or more devoted band of enthusiasts.

LAND

The land had long ago been nationalised without compensation; it was not even valued. The Mossoviet decided the best use of each piece of land. Individual owners did not exist and therefore could not object.

If a powerful organisation, such as the Commissar of Heavy Industry, wanted a certain piece of land and the Mossoviet did not want to give it them, the matter was decided by the Government. But the cost of land in roubles did not enter into anybody's calculation. The question of compensation simply did not exist. The sole question was: what is the best use of the land in the national interest?

¹ See "Moscow in the Making" (Longmans, Green & Co.), Chapters VI-IX.

FINANCE

Planning in Russia is based on men and materials; year by year, Gosplan allocated approved quantities of labour and materials to the rebuilding of Moscow, and the work proceeded at the planned rate so far as practicable. The question of finding the necessary roubles was secondary; finance hardly counted at all in the way it does here.

THE PLAN

The ten-year plan was laid down in June 1931. The maximum population was settled once and for all at five million. This was enforced by keeping factories away from Moscow and by a passport system; only those with passports were allowed to live and work in Moscow. By 1936 the plan was complete in outline and many sections had been worked out in detail. Much work had been done on the great radial and ring roads; the building of boulevards along the whole length of the Moscow River was well advanced; six of the beautifully designed new bridges were either finished or nearly finished. The first sections of the famous underground railway were at work. Progress since the plan was first conceived in 1931 had been remarkable.

DRIVE

The original plan was passed in 1931. On July 10th, 1935, the Government issued a detailed development of the original plan. As evidence of the interest of the Government in this scheme it was signed personally by Molotov and Stalin.

One of the members of the Mossoviet who was specially connected with the plan told me of Stalin's personal interest in it. He had recently been sent for by Stalin to discuss the width of certain streets. He showed me with pride a special telephone with a list of those high members of the Party who were privileged to have it. In each case the telephone went direct to the Party member, not through secretaries. Stalin's name was there and he could ring him up at any moment, but, he added, "I should think once or twice or three times before doing it."

The Mossoviet showed great courage in pressing on with the fundamentals of planning: the making of the roads, the planning of the boulevards, etc., while, comparatively speaking, neglecting the terrible overcrowding in the houses. They took the view that the people would be prepared for ten years to suffer this inconvenience in order ultimately to get a superbly planned city, which would not be possible if the houses were built before the general layout of the city was developed.

I came across one amusing instance of the way in which private interests were constantly overridden. The British Ambassador lived in a fine mansion on the banks of the Moscow River; like every other building, it was very overcrowded. The basement was over-filled with three kitchens to cook for the Ambassador's family, the diplomatic staff, and the domestic staff. While we were there he received a letter from the head of the Moscow Water Committee informing him that in six months' time the level of the Moscow River was to be raised by three metres; and that it was estimated that his basement would be flooded to a depth of two metres. The writer finished politely by expressing the hope that this would not cause the Ambassador any undue inconvenience! No question of injunctions; no question of alternative accommodation; no question of a reduction of rent.

This may be carrying things rather far, but are not a few personal injustices perhaps preferable to the utter impossibility of carrying through a great redevelopment plan of this sort under our present laws in Britain?

Such are the conditions under which the planning of Moscow was being carried on before the war broke out. To sum up what is happening in Moscow, I quote the following passage from "Moscow in the Making", p. 232:

"Mr. Herbert Morrison wrote an article during 1936 in the *Evening Standard*, setting forth what he would like to do with London.

" 'Not only would I wish the solid, urban sprawl of London to be checked—for London is unhealthily large—but I would like to see "continuous" London cover a much smaller area than it does at present.

" 'I would create a green belt for London very much nearer than the green belt courageously envisaged by the London County Council can possibly be to our great city.

" 'I would give it a coherent and homogeneous local government, removing every public authority that had no good reason for its continued existence and concentrating power, so far as practicable and administratively convenient, in a great Municipal Corporation of London elected by the citizens.

" 'I would make a town plan to which the future development of that new London should conform.'

"These are the main things Mr. Morrison said he would like to do. But he concludes by saying:

legislative framework, but not to encase it in a legislative strait-jacket. We intend that the corporation T.V.A. shall have much of the essential *freedom and elasticity* of a private corporation."

THE DAMS

The first stage of the work was, of course, the building of the dams. This work has proceeded steadily and rapidly during the last ten years, and it is hoped to complete the main programme by 1945, at a cost of something under one billion dollars. Some of the dams up in the mountains are used solely for the storage of water and the creation of power; those on the main river are also equipped with great locks, with a rise of water up to 100 feet. It has been said that this comprehensive programme of river control is probably the most impressive physical engineering project since the completion of the Panama Canal.

It is estimated that the financial results of these great works will be as follows:—

Navigation

The savings by 1945 are expected to be about 2½ million dollars per annum; by 1960 it is hoped that this figure will rise to 8 millions.

Flood Control

It will be possible to cut off the flow of the Tennessee River completely for a week, at the point where it joins the Ohio River on the way to the Mississippi, when there is danger of floods. This should reduce the peak flood by about 2 feet right down the Mississippi. The damage done by the worst floods on the Mississippi amounts to immense sums. It is hard to estimate the saving on an annual basis, but it is thought that an average saving of 10 million dollars per annum is a conservative estimate.

Power

The estimated saving by consumers who have changed over from the old to the new price will be ten million dollars per annum by 1945. Prices have been roughly halved. In addition to this economy there has been a revolutionary increase in the use of electricity.

There was in the early years great opposition from the public utility companies to the development by the T.V.A. of hydro-electric power. About fifty actions were fought against the T.V.A., one of which was led by Mr. Wendell Willkie. This opposition came to an end a few years ago.

The function of distribution of electricity is in the hands of 128

local authorities and co-operatives, through whom T.V.A. power flows into half a million homes, farms, factories and places of business.

T.V.A. supplies the electricity so cheaply that the 128 distributors make substantial financial profits, and yet provide retail electricity so cheaply that the Chairman of T.V.A., Mr. David Lilienthal, recently said, "This valley will be the first to enjoy to the full the fruit of this new age, the Age of Electricity. Those who have its blessings in abundance will come into a new kind of civilisation. New standards of living, new and interesting kinds of jobs, totally new industrial processes, an end to drudgery, congestion, waste—such things are in store for us. For in this Valley in another decade, electricity will hardly be reckoned in cost, so cheaply can your communities then supply it."

THE WELFARE OF THE REGION

The second function with which the T.V.A. was charged was, to repeat President Roosevelt's words, the development of the resources of the region for its general, social and economic welfare. T.V.A. has shown great initiative and skill in undertaking this task. The first thing to be done was to get to know the region, and to find out methods of helping. Direct contact with the individual farmers, residents and factories throughout the region has been secured by appointing 100 agents, one for each county. The main task of these men is to study the conditions of the farmers and in every possible way to help them to secure the best all-round results. They are mostly college graduates, and they work mainly under the direction of the seven State universities which are situated in the Tennessee Valley, though they also report direct to the T.V.A. authorities.

Research

T.V.A. has a research staff with about 300 university graduates. It co-operates closely with other organisations, in particular the agricultural, engineering, and chemical departments of the seven State universities.

The object of the research is to improve the conditions of life in the Valley; every research is chosen with that object in view and is intended to lead to action. T.V.A. carries the work on after the researchers report. The second stage is to demonstrate the utility of the experimental product, and then get some firm to make it on a commercial basis. The third stage is to take the necessary steps to see that the product is effectively and fully used throughout the Valley.

Researches range from big problems such as phosphatic fertiliser down to the design of a series of cheap and simple machines for use on small hillside farms whose machinery needs are ordinarily neglected by large manufacturers interested in bigger markets.

A very considerable number of researches have been developed to the stage of practical results and pretty wide application, under two broad heads:

(a) Development of improved methods of local processing of the region's raw materials.

(b) Developments to encourage soil conservation and increased farm income.

The most important single research has been the production of a highly concentrated phosphatic fertiliser. A new method of manufacture was worked out and is now being applied on a large scale by the T.V.A. itself. Free fertiliser is being supplied to all the demonstration farms, and manufacturers are beginning to make this highly concentrated fertiliser, using the T.V.A. electric furnace process. T.V.A. furnishes designs and engineering information.

This is a major achievement, and in view of the long hauls which are unavoidable in phosphatic fertilisers in the United States will represent an important national economy.

In the early days the usual university trends prevailed, each researcher being interested in his particular speciality in the hope of advancing knowledge.

A new spirit has developed—that the purpose of the research is to advance the conditions of the people and that all the scientists must co-operate with this in view, whether to improve health, to prevent soil erosion, to increase the output of farms, to preserve farm products, etc. All research should be inspired and directed by one common aim.

This new view is becoming widely accepted in the T.V.A. research department and in some of the co-operating university departments.

Help to Farmers

35,000 demonstration farms have been selected by their neighbours, 23,000 of them in the valley. These farms are treated as complete units and everything is done by the agents to help the farmers to improve their results.

In particular they have all been given free supplies of the new phosphate fertiliser. In return they pay the transportation cost

and, more important, they agree to keep records of farm operations, yields, income, and to adopt diversified cropping practices to conserve soil and improve income. Good results are being achieved, and the farmers, seeing that these results are obtained by their neighbours on farms selected by them, understand and are impressed by them.

The use of demonstration farms on this scale and in this way almost amounts to a new invention as a method of getting improved and more scientific ideas adopted by a farming community.

Recreation

Demonstration parks and centres of recreation have been created around the new large lakes or reservoirs behind the T.V.A. dams—picnicking, fishing, sailing, bathing, etc. These are already attracting a substantial number of tourists into the region and creating new opportunities for trade. Owing to the war, and particularly to the tyre shortage, people are not able to get to these recreation centres for the time being, but there is every prospect that when peace comes some of the lovelier parts of the Tennessee Valley will develop into tourist centres of national importance.

Two of the States, stimulated by the example of T.V.A., have already created strong recreation boards, and are taking active steps to develop the amenities of their territory.

Health

Active work is being carried on for the prevention of malaria and in other ways to promote health. T.V.A. assists State and local health agencies to do a better job.

Improvement in Local Government

Local government has not been particularly efficient in the Valley. T.V.A. has had considerable influence:

(a) T.V.A. has been in a position to insist on sound business methods in the distribution of electricity by 128 authorities. This has set an example of efficiency for local government.

(b) T.V.A. has done a good deal to stimulate and help city planning. Towns and communities have created planning boards with technical assistance available from the T.V.A. and the States.

(c) T.V.A. has greatly strengthened certain voluntary professional associations (accountants, municipal managers, etc.)

in the Valley. These in their turn have done much to develop more efficient accounting systems both for electricity and for the work of the local authorities as a whole.

Broadly speaking, T.V.A. has been an example to the region of an efficient, successful and honest powerful Government agency, and has been a centre of stimulus and encouragement for the liberal elements throughout the local government authorities of the region.

ACHIEVEMENTS

It is generally agreed that the building of the dams and of the work that goes with it has been admirably done. Early in the war T.V.A. was able to provide no less than 250,000 kilowatts for the manufacture of aluminium. This was a major service to the conduct of the war, and did much to establish the importance of T.V.A. among those who had not previously been convinced.

One interesting point is the excellent way in which engineers and architects co-operated in the construction of the dams. The "Architectural Forum" calls the dams "overwhelmingly beautiful". Lewis Mumford writes: "There is something in the mere cant of a dam, when seen from below, that makes one think of the Pyramids of Egypt. Both Pyramid and dam represent an architecture of power. But the difference is notable, too, and should make one prouder of being an American. The first grew out of slavery and celebrated death. Ours was produced by free labour to create energy and life for the people of the United States."

I think it is true to say that the economic value of the dams and their working under the direction of T.V.A. is to-day generally recognised, both from the regional and the national point of view.

The second task of improving the standard of living in the Valley is being undertaken with energy, initiative and skill. It is difficult to measure the results, partly because they can only emerge slowly, and partly because there are other agencies working in the Valley. Certain statistics have been published¹ showing a more rapid increase of population and industries in the Valley than in other similar parts of the United States, and indicating that the work of the T.V.A. is already being effective. But it is too early to expect any dramatic improvement from the work on the soil. Even in the case of the demonstration farms it takes at least five years to show substantial results and perhaps ten or fifteen years before they can be got into really good condition. It will, of course, take considerably longer to achieve similar results

¹ Report on Regional Resource Development, published by the National Planning Association.

from the mass of the farms. But it is reasonable to hope that very substantial results should be shown in the course of the next ten years.

PUBLIC OPINION

(a) The public utilities brought about fifty actions to try to prevent the manufacture and sale of cheap electrical power by the Authority. These have now apparently been finally defeated.

(b) A Congress committee of nine members made an exceedingly thorough investigation of the whole operations of the Authority in 1938. They sat for six weeks locally and again for five weeks in Washington, and examined over a hundred witnesses. They also had an engineering staff which investigated the whole of the operations in great detail. The majority report gives very high testimony to the integrity and efficacy of the whole of the work of the T.V.A. There was a minority report of three members which was less favourable.

(c) The Report on Regional Resource Development, recently published by the National Planning Association, an authoritative and impartial body, gives high praise to T.V.A. and urges that it should be a model for a substantial number of other authorities throughout the country.

(d) The business community in the Valley at first regarded the T.V.A. with great suspicion. The successful sale of cheap power and the policy of co-operation and conciliation of the T.V.A. have not only removed all active opposition, but have created outstandingly friendly relations with the majority of the official and voluntary bodies operating in the region.

CONSTITUTION

Why has T.V.A. achieved such an outstanding success? It is true that the physical conditions were ideal; but success would not have been achieved unless the right men had been in charge with the right powers. I was immensely impressed with the enthusiasm and the abilities of the directors and members of the higher staff whom I met. They all felt that they were doing a job to which it was worth while devoting their whole lives and energies. The control is in the hands of three full-time officials—a Chairman and two other Directors—who each receive a salary of \$10,000 a year, the maximum which the Authority is allowed by law to pay.

One peculiarity of the United States is that public salaries are very low in relation to what can be earned in private business. Several of the employees of T.V.A. have been offered double their present salaries to go elsewhere and have refused because of their sense of public service in T.V.A.

Under the Act of Congress the directors are responsible for the management of the whole concern; there are no advisory bodies, there is no control over their day to day decisions. They can only be controlled in two ways. Firstly, the President can remove any of them and replace them by others. Secondly, Congress has every year to allocate the funds necessary for carrying on the T.V.A., both as regards capital and income, and has in this way considerable powers of control. This may be a danger point because the Appropriation Committee of Congress may be hostile to the administration and may take action for political purposes. It is a fact that last year, Congress, on the advice of the Appropriation Committee, deleted a substantial proportion of the travelling expenses of the staff of T.V.A., thereby making the work very difficult and tending to discourage the directors and staff. To an outside observer this would seem to be one of the worst possible ways of controlling an organisation like T.V.A., and to some people there would appear to be serious danger to the future of T.V.A. in this kind of control.

Subject to this, the directors are appointed on the principle of the fullest possible responsibility. They are trusted to do right. They can be dismissed if they do wrong. There is no doubt whatever that the President has chosen the right men, and that they are putting their whole hearts and energies into the job. They have built up and inspired an organisation of high efficiency and with a fine spirit of public service.

STAFF

The Directors have created their own civil service regulations. Responsibility has been decentralised from Washington to Knoxville, headquarters of T.V.A. The Directors are firm believers in this principle and have done all they can to delegate responsibility right down through the staff. They have done everything in their power to cut out civil service red tape and the spirit of bureaucracy. The whole staff are encouraged to take responsibility, and not to worry if they make mistakes. The Directors have managed, I think, to get a spirit of constructive initiative throughout the staff as good as anything in the best private businesses. As an American observer puts it: "There is the alleged dilemma of operating with personnel selected either by an unimaginative civil service commission or by politicians. There is the red tape of Government contracting, the restrictiveness of Government auditing, the necessity of placating Congress if appropriations are to be secured, the political interference that is to be expected. It is thus of particular importance that the T.V.A. has been able to

escape both the civil service and the spoilsmen while building up what is probably the most constructive and imaginative public personnel programme ever seen in this country."

DEMOCRATIC PLANNING

It is important to remember that the powers of T.V.A. are limited to the construction of the dams and their working from the point of view of the production and sale of electricity, of flood control and of navigation. On the other side of their work, the development of the welfare of the community, they rely entirely on persuasion and co-operation, backed by the power to make financial grants up to a certain figure. Their task has been to secure efficient planning over the region by purely democratic methods. I have already pointed out that the policy of the directors has been to decentralise responsibility throughout the staff; in particular, to give as much responsibility as possible to the 100 agents who live and work in close personal contact with individual citizens. So far as possible they arrange for the maximum number of decisions to be made in the field, not at a remote headquarters. They also co-operate closely with many federal authorities in the region, with numerous organisations of the seven different States, with several departments of the seven State universities, with more than 100 local authorities, and with any number of citizens' voluntary organisations.

The T.V.A. makes a point of keeping in the background as far as possible, and of giving the maximum share of the credit to all the organisations with whom it co-operates.

CONCLUSION

One of the most important problems before the democracies is to secure effective leadership in public work. The method adopted by President Roosevelt of nominating the Directors and giving them full responsibility on the principle of "trust till sacked" has been conspicuously successful. It is interesting that the movement among American local authorities is in the same direction: the election of a strong mayor or a city manager who is given pretty full responsibility so long as he holds his post. The present constitution in New York City provides an example of concentration of great power in the hands of the Mayor, and for the last ten years has been showing remarkably good results.

But T.V.A. is, I believe, the best of them all. It has proved dramatically that large-scale and long-range planning can be carried through with full public consent; that public control is compatible with high efficiency.

PLANNING AND BUILDING IN THE U.S.A.¹

THE AMERICANS HAVE been builders rather than planners. They excel in building big things, whether mighty skyscrapers or immense river dams, or bridges or highways; they lead the world in carrying out great imaginative enterprises on a scale vaster than anybody else² has had the courage or vision or means to undertake.

They believe in private enterprise and in the leadership of great industrialists like Ford, Owen Young and Kaiser. They have regarded Government interference with suspicion and dislike, which is still much stronger in business circles than it is here. But during the last ten years perhaps two-thirds of the population have supported the New Deal; there has been a rapid swing towards planning. A leading Chicago real estate man says: "Business, Government and State and local groups are busy as they have never been before on planning for the post-war period in every field of endeavour." Similar developments are taking place as regards what we call town and country planning, which the Americans prefer to call city and regional planning. I propose in this chapter to abbreviate this by using the words "city planning".

The Federal Government has no legislative powers on city planning. Each of the forty-eight States has full legislative control of its own planning affairs; they delegate their powers in varying degrees to the counties and cities. Some cities have almost complete "Home Rule".

The Constitution of the United States was based on a balance of powers; what that means under modern conditions is that the Federal Government has no national planning powers. Fortunately, the Federal Government has most of the taxing powers, and has discovered under the New Deal, as we discovered in Britain some decades ago, that much can be done in the way of national planning and control by making grants in aid to localities, and attaching to them such conditions as the central government may decide. Much has been done in this way during the last ten years with regard to public works in general and hous-

¹ This chapter is based on a three months' visit to the U.S.A. in autumn 1942. I saw something of the planning and building in about fifteen of the largest cities, and had long talks with members and officials of planning, housing, parks and highway authorities in many of these cities.

² Some of the statements in this chapter probably do not apply to Russia, which has no doubt been building during the last generation as fast as the United States.

ing in particular. The Federal Government has set up important machinery for distributing these grants and is rapidly building up an effective technique for planning and control.

EXPANSION OF CITIES

The American building industry has, during the last generation, had a wonderful opportunity for building on a scale unequalled in the history of the world. The almost incredibly rapid growth of their cities may be illustrated by the facts for Detroit and Los Angeles. In 1900 the population of Detroit was about 200,000; to-day it is nearly two millions. During the same period the population of the city of Los Angeles rose from 100,000 to one and a half millions. Both these cities are great centres of war industry and are still growing very rapidly.

The growth in the number of private cars is equally impressive. In Detroit four out of every five families own a car. In Los Angeles one car is registered for every 2.4 residents; an average of nearly $1\frac{1}{2}$ cars per family. An architect who has built many middle-class houses in Los Angeles told me that a garage for two cars was the minimum, while one for three was common. Indeed, distances are so great and public transport so lacking in Los Angeles that every adult really needs his own car.

HOUSING

The housing of the people is always the biggest single item in the work of the building industry. In America nearly all the houses have been built by private enterprise. In Los Angeles at one period 20,000 houses in a year was normal; the maximum was over 40,000 in a single year.

A Chicago authority writes: "There are about 22 million single-family residences in the United States. Private and public research agencies are planning to produce low-cost single-family dwellings on a mass scale in the post-war period. Mass-production methods and mass-construction methods, taking advantage of new materials and processes, make some of us feel that the result will be the greatest period of building for home ownership that our nation has ever experienced."

But, as in Britain, private enterprise cannot build suitable houses for the lower-paid workers at a profit, and a large number of families in most great cities are living in overcrowded conditions and in substandard houses.

The Federal Government began some years ago to subsidise low-rental houses, of about the same standard as those subsidised by the British Government. The best account of this is

given in "The Seven Myths of Housing", by Nathan Straus, who was Administrator of the United States Federal Housing Authority during the period of its main activity from 1937 to 1941. During that period about 130,000 homes were built with federal aid, so that the United States is very much at the beginning of its experiments in publicly-assisted housing as compared with Great Britain.

Judged by Mr. Straus's book, the problems of the respective parts to be played by public and private enterprise housing respectively are very similar to those in Britain. The following table gives exceedingly interesting information on this matter:—

Incomes of All "Urban" Families in 1940
(compared with groups served by private enterprise and public agencies)

Family income.	All urban families	Families for which new housing was provided by private enterprise.	Families for which new housing was provided under the U.S.H.A. programme.
Lowest income—third: Less than \$1,200 .	33·3%	1·2%	92·4%
Middle income—third: \$1,200 to \$1,599 .	16·7%	4·9%	7·5%
\$1,600 to \$2,099 .	16·7%	17·7%	0·1%
Highest income—third: \$2,100 and over .	33·3%	76·2%	0·0%
	100·0%	100·0%	100·0%

Mr. Straus comments on the facts given in the table as follows:—

"Two-thirds of all housing produced by private enterprise (on the basis of FHA experience) is built for the upper income-third. Only one third of the new homes are within the means of families in the middle income-group, and three-fourths of these are concentrated in the top half of that group. Private industry provides very few homes for families in the lower half of the middle income-group and, except for a few shacks erected in communities without adequate building codes, no new homes for families in the lowest income-third.

"These facts, unpleasant though they be, should serve to

clarify the housing picture. No conceivable change in economic conditions after the war will put enough into the pockets of the families in the lowest income-group to enable them to afford good housing. Those families, one-third of the nation, comprise the population of urban and rural slums. They constitute the great unsatisfied housing market."

Unfortunately, an analysis similar to that given in the above table is not available as regards British house-building. I have dealt with the matter elsewhere,¹ and concluded that one-third of our families live in slum houses and can only be properly rehoused with the help of subsidies. This appears to correspond closely with Mr. Straus's conclusion in the U.S.A.

The principle of Government subsidies and of public housing is by no means as generally accepted in the United States as it is here; there are not yet in existence any Federal or State plans for meeting the needs of the lower-paid workers on an adequate scale. There is nothing comparable to the British Government's declaration of intention of building four million houses in the twelve post-war years, of which two and a half million are to be for the lower-income families.

But opinion is beginning to move, and Mr. Straus's book gives an exceedingly interesting and stimulating account of the fine constructive work done by the Housing Department of the Federal Government, and of the difficulties, political and other, which they have had to face. Mr. Straus has taken full advantage of the inside experience he gained during his four years as Housing Administrator and has produced a book that should be of great importance. He has set an example which Ministers in this country might well follow.

GARDENS

There is an interesting contrast between the habits of the United States and Britain as regards gardens. In Britain, we built in the inter-war period 4 million houses, nearly every one of which has a separate garden of about 2,000 square feet. The gardens are fenced both back and front for privacy, and in order to keep out dogs and other nuisances.

In the United States separate fenced gardens for the smaller houses are almost unknown. The front is always an open grass strip; the land at the back, if it belongs to the separate houses, is generally used for the car, for garbage and sundry junk. Cultivation is almost unknown. For instance, Green Belt City, which corresponds to Welwyn, and is the outstanding example in the

¹ See Chapter XVI, p. 116.

U.S.A. of a garden city, was designed by landscape architects; every house, tree and shrub was planned for effect as seen from outside. The whole thing is beautifully done. But there are no gardens, whereas in Welwyn every house has its own fenced garden as a matter of course.

It is true that on the whole our climate is better for gardening; but fundamentally the difference is simply one of custom. And in Britain the whole thing arose through a Government report in 1918 recommending separate gardens, and through the steady pressure of the Government, and the willing acceptance of the people, which ensured the building of gardens throughout the whole inter-war period on a scale which had never been attempted before in history.

Which is right, the American method or the English? Nobody can answer this dogmatically, but I suggest that the ideal to be aimed at is probably a combination of the open American front garden, which is so attractive to the passer-by, and the British back garden, fenced in and private, which is so useful for growing flowers and vegetables and gives such pleasant privacy.

SKYSCRAPERS

The most striking, and most typically American, kind of building has been the skyscraper. Most of these were built during the boom period in the twenties. The Empire State Building in New York, the tallest building in the world, has never been fully occupied. The era of skyscrapers seems to have ended, at least for the present. Many authorities think that the whole thing was a mistake and that it would have been more economical never to have built any skyscrapers except under the special conditions of the Wall Street district in New York. They hold that if no buildings of more than ten storeys had been erected, the necessary accommodation could have been provided, and problems of traffic and of city planning in general would have been more easily solved. In Los Angeles no building of more than thirteen storeys is allowed to be put up.

There is, however, an opposite school of thought which holds that skyscrapers are not a mistake in themselves; what has often been wrong has been the overcrowding of skyscrapers on the land. The skyscraper itself has many advantages. The Rockefeller Centre, for instance, is an immense building, in many ways exceedingly convenient and pleasant. The views from the upper storeys are superb. A high authority writes: "If the skyscrapers of lower Manhattan had not been clustered in one area but had been spread throughout the city in the form of ten or

twenty Rockefeller Centres, they would not have resulted in an uneconomical use of the land nor have caused the serious congestion difficulties they now present. Uniform building height and bulk in the long run probably would be just as undesirable as the tremendous variance we now have in New York City."

CIVIC BUILDINGS

The American cities have shown far more vision and confidence than ours in regard to civic buildings, and especially to well-planned civic centres. Nearly every large city has made some attempt at imaginative civic building. San Francisco took advantage of the great fire in 1906 to plan a fine civic centre, and substantial progress has been made in building it. Los Angeles has planned its civic centre on a great scale, and has begun with the largest city hall in the world, their only skyscraper, with magnificent views over the city. Even the notorious Pendergast government of Kansas City, alleged to have committed unnumbered crimes, built a fine civic centre dominated by a twenty-nine-storey city hall, and a really magnificent six million dollar auditorium, to seat 12,000 persons.

School buildings are equally impressive; one constantly finds, in the smaller towns, that the finest building is the high school, which is regarded with pride throughout the city; and I saw many fine and impressive hospitals—built either by Government or by private agencies, outstanding not only for their buildings, but for the accommodation and scientific equipment.

And so on. Wherever I went there was a civic pride in good buildings and a vigour in execution that made one wish the city fathers of most English towns had a bit more of America's imagination and courage. But it is not only in civic buildings that the Americans beat us. Their university buildings all over the country are on a scale of magnificence that makes one ashamed of the relatively crowded and inadequate buildings of our provincial universities.

And the railways have built really splendid stations in many of the great American cities. These have often resulted from a rationalisation of the railway system; one great new building has been put up to replace several obsolescent stations. There must be a dozen of these fine new stations, each of which is incomparably more impressive than the best we have in Britain.

HIGHWAYS

The Americans have, in response to the demand for roads to accommodate safely immense numbers of cars travelling at a

high speed, invented and developed the express highway. This is a major road, which, according to the latest definition of the New York City Planning Commission :

(a) Allows the abutting frontages to have no access to the highway.

(b) Has no grade crossings. All crossings are by over or under passes; therefore no traffic lights are needed.

(c) Has entries and exits spaced at considerable distances, by roads which are nearly parallel to the highway before joining it.

(d) Has two tracks, usually two or three lanes each way, separated by a safety strip.

A parkway is a major road built through a narrow but very long park or system of parks and is used exclusively by private cars.

Chicago has its famous Lakeside Drive, an eight-lane parkway running for 13 miles along the Lake, developed as an express highway for most of its length, largely on land reclaimed from the Lake. This is much the most important planning achievement of Chicago, saving an immense amount of time for the daily commuters from the suburbs north and south to the business centre of the city. One gadget, typical of American ingenuity, is a "rising kerb" in the northern section of the parkway, hydraulically operated to allow six of the eight lanes for the incoming rush of traffic in the morning, only two being available for outgoing cars. During the day it provides four lanes each way, and in the evening six for the outgoing cars.

In Kansas City there are 100 miles of boulevards: all major roads, nearly all of them having trees and grass verges and centre strips, and many of them being fine parkways.

New Orleans has 60 miles of "floral trails", boulevards with central strips planted often with azaleas and camellias.

All the larger cities have taken action in varying degrees to solve the motor-traffic problem, and at the same time to add to the beauty of the city. Many parks and playgrounds are linked together by parkway systems; the roads in these systems are for vehicles only, and are inaccessible to pedestrians, except at well designed parking places and lay-bys. Convenience, beauty and recreation are combined.

New York has the longest experience and has done by far the most to develop the express highway and the parkway. The first parkways were built in the county of Westchester, where many wealthy New Yorkers lived, beginning in 1906. Partly

because of their age, which has given time for the trees to grow, and partly on account of good design, they are probably the most beautiful parkways in the world.

During the last thirty years there has been steady development of the arterial road system in New York City and those parts of the State surrounding it, much accelerated during the last ten years under the regime of Mayor La Guardia by a very forceful personality, Mr. Robert Moses, and by large grants from the Federal Government.

Fine systems of parkways have been built on the mainland north of New York's island of Manhattan. And to the east, on Long Island, a magnificent parkway, 34 miles long, running right round the city area, has recently been completed. It is an express highway throughout its length, beautifully laid out, with numerous parks and bridges, petrol stations and other buildings, all designed by good architects, and with no posters visible anywhere.

But the finest achievement of all is undoubtedly the building of the East and West River Drives, each stretching about 10 miles north and south along the two sides of the Island of Manhattan. This is the central part of the city of New York, and is by far the most densely built up island in the world.

In 1939 nearly a million motor vehicles were registered in New York City, and they made 230 million journeys across the rivers surrounding Manhattan. Motor traffic north and south on the Island would have been impossible had it not been for the East and West Drives. The East Drive is not fully express, but it carries a great deal of traffic at a good average speed. The West Drive is express throughout its whole length. A motorist can drive from the mainland in the north over a fine bridge, down the West Drive, and through a tunnel back to the mainland to the south-west, keeping up 35 miles¹ an hour the whole way, without once slowing down except for the tolls on entering the tunnel. The northern part of the West Side Drive is a superb parkway; the southern part is an elevated roadway behind the docks for the exclusive use of private cars. The old dock road has been left for commercial vehicles; the railway has been moved somewhat inland, and is partly elevated and partly underground. To build the Drive down the fully developed side of Manhattan Island, with land at exceedingly high values, was a feat requiring a high degree of technical skill and ingenuity, also magnificent drive and courage and readiness to face immense expense. It is a stimulating example of the American genius for really big

¹ It is illegal to drive at either more or less than 35 miles per hour on the New York express highways.

and difficult tasks. It is a challenge to the planners of the new London.

New York City is now preparing detailed plans for the substantial completion in five years after the war of the necessary express and major highways for the whole city. It is hoped that this system will deal effectively with the huge volume of traffic which may be expected at that date, except as regards occasional peak loads.

To sum up, the great and difficult problem of providing an adequate arterial highway system for New York has been tackled, especially during the last ten years, with vision, with fine energy, and with conspicuous success. It is one of the outstanding achievements of civic democracy.

BRIDGES AND DAMS

America is also a great bridge-builder. San Francisco has built its eight-mile-long Bay Bridge and its superb Golden Gate Suspension Bridge, with a span of no less than 4,200 feet, at a cost of 78 and 35 million dollars respectively. New Orleans has its two-mile rail and road bridge over the Mississippi; and New York has spent half a billion dollars in the last ten years on new bridges and tunnels across its rivers. All these bridges are owned by public corporations, and paid for by tolls, usually about 25 cents for a private car; and until the recent introduction of petrol rationing most of them were paying well. The American motorist is ready to pay freely, through tolls or petrol taxes, for good roads and bridges.

The dam-building is spectacular. There are the great dams in the Tennessee Valley and such outstanding examples as Roosevelt, Boulder and Grand Coulee, the last being three times as large as Dnieprostroi.

PARKS

Here again America leads the way with its superb national parks. These are places of natural beauty, ranging from hundreds of square miles in area to a few square miles. The amenities are carefully guarded and controlled; there are spacious and well-designed camping grounds, cabins, hotels and restaurants, flora and fauna are jealously guarded. Rangers are always present, including scientists of various kinds, local cowboys and, at peak periods, university students on vacation. They are a corps of men of high standing; they conduct parties on horseback and on foot, and give camp-fire talks which help to an understanding of the country. The parks I happen to have seen include the immense mountain parks of Denver in the Rockies; the great

park in San Francisco, planned and made most beautiful by the fifty years' work of a Scotchman who has just died at the age of 96; the Central Park of New York, the Riverside parks of New Orleans and Philadelphia, and the fine green central parts of Washington, the only large American city planned from the beginning. Many of these great parks are really fine, but there is a serious shortage of parks and children's playgrounds near the centres of the cities. Here again New York has done a good job in the last ten years, having created several large and well-designed parks and bathing beaches, as well as large numbers of smaller parks, including no less than 400 separate children's playgrounds.

ZONING

A great deal of energy has for many years been devoted in American cities to zoning. Most cities have had zoning commissions which have laid down the uses permitted for each piece of land, whether for light or heavy industry, for commercial objects of various kinds, or for residential purposes, usually defining maximum height of buildings, percentage of area to be covered, amount of open spaces, etc. A good zoning ordinance, effectively enforced, should define and maintain the character of the different districts of the city and should limit the maximum density to suit traffic facilities and other relevant factors.

Most experienced planners think that zoning has in general failed to give adequate protection to the city as a whole for two main reasons. In the first place, it has been badly done. Zoning should be a tool to implement the city plan after it has been made by ensuring that land used is in accordance with the plan. But in many cases zoning preceded effective general planning.

Then again, the ordinances were generally laid down in the boom period of the twenties, when planners were often carried away by the prevailing over-optimism. An amazing example of this optimism is provided by a map published in a leading Detroit paper in 1926, which the secretary of the Detroit Planning Commission showed me. The map indicated no less than 30 square miles reserved for the business area, to be filled with skyscrapers and other huge buildings. In spite of the fact that Detroit has grown as fast as any city except Los Angeles, the business area is to-day less than one square mile, and is more than adequate for all needs.

The second reason for the failure of zoning is that it has not generally been enforced. The real estate people have had a wonderful time, developing one area after another. They have generally regarded zoning with suspicion and dislike; all they have

asked has been to be let alone to get on with their development. Zoning could not increase opportunities for development; on the other hand, it could easily hinder them. And the real estate interests have been rich and powerful and well organised. Their organisations have in many instances been responsible for over-zoning, and also for the custom of making exceptions to the zoning laws in response to appeals. Many city councils have adopted zoning ordinances, rather half-heartedly, in response to the pressure of citizen groups, and have been content to make them ineffective in response to pressure from real estate groups.

For instance, posters (billboards), large and small, are more numerous in America than in England. In the opinion of most architects, a considerable section of the public main roads are made hideous by billboards. But in many states, when zoning commissions have tried to regulate or prohibit the use of posters in certain positions, the judges have held it unconstitutional to prevent a man, for merely aesthetic reasons, from making a legitimate profit by allowing posters on his land. However, public opinion is changing, and the courts in several States have recently upheld the right of the legislatures to prohibit the use of posters on property abutting upon a highway without compensation.

In New York a zoning ordinance was first adopted in 1916. There was strong public opposition to any drastic restrictions, and it is said that if the city had been developed up to the limits allowed by the zoning laws it could have accommodated the whole population of North and South America, and also provided them with all the office space they needed!

During the last five years there has been much re-zoning; restrictions are becoming greater and control over building operations more exacting. Zoning in New York City is effectively enforced; only minor variations are granted in cases of exceptional hardship. Opinion among real estate developers has changed, and in recent years they have several times petitioned the City Planning Commission to adopt more restrictive zoning.

BLIGHTED AREAS

One Sunday morning I walked less than half a mile from my hotel, in the very centre of Detroit, and saw my first "blighted" area. Each "block", a rectangular area about 100 yards square bounded by four straight streets, included factories, derelict, old, occasionally new; old houses, large or small, empty or occupied by several families; and a considerable proportion of open space, sometimes used for parking, sometimes covered by

debris and a typical American city weed, about three feet high. Roads and alleys were often unpaved and uncleansed, and there was garbage everywhere in streets and courts. I saw a man walk out along a flat roof and throw an armful of debris into the street, somewhere near a garbage tin. There was no crowding on the land; there was plenty of room, but neglect and decay everywhere. A Detroit citizen described the business centre of the city as a "desert island in a swamp of blighted areas".

A blighted area has been described as follows: "One which is decaying, whose existing buildings and houses are becoming progressively obsolescent, and which does not rebuild and re-invigorate itself". A blighted area is by no means the same as a slum. America has few slums comparable to the slums of Manchester, Birmingham or London. But blight is undoubtedly more widespread and more serious in America than in Britain. The reasons are generally given as follows:

1. Bad planning in the first instance.
2. The restlessness of Americans. All but the poorest people have cars. They tend more and more to leave their city homes and live out in the country.
3. Cheap land in the suburbs, made accessible by modern highways, attracts home-seekers as against high-priced land in the city.
4. Because of the amount of open space available, it is often less expensive to develop new projects and create new residential areas than it is to rehabilitate older structures.
5. Landowners have expected to get high prices for the land, and not being able to do so, have left it vacant or derelict in the hope of appreciation.
6. An invasion of poor whites or negroes from the South provides some rent and helps the landlord to pay taxes, but further reduces standards.

There is no general agreement as to remedies. Some planners are beginning to take the view that one of the most important functions of city government to-day is to bring about large comprehensive programmes for rehabilitation of blighted areas almost to the extent of denying public facilities to proposed developments on the periphery of the city.

The building of better and faster highways right from the centre of the city, stretching out indefinitely into the country, must obviously tend to increase the number of commuters. I heard of men driving 40 or 50 miles to business every day in Chicago and Los Angeles.

All city planners are anxious to develop attractive residential districts for all classes of the population within the city boundaries.

American densities are so low compared with ours,¹ that it should often be possible to develop areas within the city as pleasant and more convenient than any outside. A conspicuous example of successful development of this kind, for the wealthier citizens, is the lovely residential area in the south-west of Kansas City.

But there is a good deal of doubt and pessimism. The distinguished economist, Alvin H. Hanson, in "Urban Redevelopment and Housing" goes so far as to say that

"Our American cities have drifted into a situation, both physically and financially, that is becoming intolerable. Their plight, moreover, is becoming progressively worse. . . . For the cities to raise the very large sums required for replanning and rebuilding would be out of the question."

He accordingly recommends that to eliminate slums and blight the Federal Government should advance up to the entire cost of acquiring the land; that the land should "be deemed (by the City Council) to have cost nothing", and should be let or sold to private enterprise for redevelopment. The Federal Government apparently to be paid for interest and capital repayment what the city council can get out of the purchaser.

This is a remarkable conclusion, since it deals with the richest cities, or at least the cities with the richest populations, in the world. It is violently attacked by other reformers, some of whom regard it as an unfair method of subsidising certain real estate interests at the expense of the tax-payer.

CITY PLANNING COMMISSIONS

City Planning Commissions have existed in some cities for nearly a generation. Recently there has been a rapid increase in their numbers and in the size of their staffs. For instance, the £20,000 budget of the city of Los Angeles and the £30,000 budget of the county of Los Angeles have been supplemented from private sources by £15,000 per annum: a total budget of no less than £65,000 per annum, for planning purposes for a population of about three millions. Not only is that, I believe, far in excess of anything in this country, but it is of particular interest that private organisations should contribute on so large a scale.

¹ See Chapter XXIX, Table C (p. 217).

There is a lot to do in Los Angeles. As a leading planner has pointed out:

"The pattern of the Los Angeles region is loose and wasteful. It is characterised by astounding distances between centres. It imposes a heavy burden of travel upon all who work and live within the area, a burden which must be borne largely by individuals because of the inadequacy and deficiencies of the more economical public transit facilities. Life in many parts of the Los Angeles community is scarcely possible without private conveyance."

He goes on to say that even before the days of its Planning Commission, Los Angeles has done some big pieces of planning:

"It has created a new harbor, brought in abundant water supplies and public power, made a comprehensive attack upon its flood and drainage problems, achieved a single railroad passenger terminal and given notable support to the principle of regional planning."

It will be interesting to see what Los Angeles does now that it is taking planning so seriously. It is certainly thinking on a large scale about roads: the Director of the City Planning Commission reports that

"The city of Los Angeles has a complete network of express highways planned, totalling 450 miles, 13 miles of which have already been constructed, with an additional 70 miles of right-of-way now being negotiated for. Precise plans are being drawn for an additional 200 miles. It is estimated that the total cost of completing the entire system will approximate four hundred and fifty million dollars."

Philadelphia is a much older city than Los Angeles, with about the same population. The City Council appointed a Planning Commission only in December 1942, after a campaign in which no less than eighty-two citizen societies had taken part. The budget voted was £10,000, which is perhaps enough to make a fair start.

I had an opportunity of seeing something of the New York City Planning Commission, which is one of the best and most vigorous. It has been given two main responsibilities: to make a master plan and an annual capital budget.

To prepare a master plan for a city of seven millions is a heavy task, and is being worked out in stages. For instance, the Commission prepared plans for the completion of the whole system

of major roads, on the basis of proposals submitted by the Highways Department, and after full and repeated discussion with all other departments which might be affected, published a report. They held a series of public hearings at which any citizen could make objections. The report was then sent to the Board of Estimate,¹ which has power to refer back, modify or reject. When approved by the Board of Estimate the report becomes part of the master plan of the city. Once this has been done, the Board of Estimate can only modify the report with the consent of the City Planning Commission, or without such consent by a three-fourths majority.

In this way the Board of Estimate has already approved as part of the master plan reports on highways, hospitals, parks and schools.

The second duty of the City Planning Commission is to prepare each year a capital budget; what we usually call the official estimates for the year for capital expenditure. This settles how much each department is allowed for capital expenditure. It gives the City Planning Commission responsibility not only to advise as to where things are to be located, but when they are to be built.

This involves collecting the demands from all departments, modifying them if necessary to make the whole demand come within the limits of money available, and presenting this recommendation to the Board of Estimate for approval or modification. This function is carried out in English cities by the finance committee; it is a novel idea to us to entrust it to a planning committee. I was told by one of the most active members of the committee which drafted the charter that when, for instance, a subway was extended, many contingent developments would be needed, such as roads, drains, electricity, housing, schools, etc. These would be foreseen by a planning committee, which would control development accordingly; but hardly by a finance committee.

The New York City Planning Commission has been given by charter substantial powers, some of which are sketched in the preceding paragraphs. On the other hand, the Mayor has to approve the annual budget for staff, and in this way has in the last resort almost complete authority. It is believed that the Charter Commission sought to leave the ultimate responsibility with the elected Board of Estimate, but the Board does not rashly substitute its judgment for that of the Planning Commission, and in practice there is no doubt that the procedure described

¹ The Board of Estimate is the effective governing body of the City of New York.

gives the Planning Commission an almost decisive influence on much of the future development of the city.

It is hard to estimate the achievement of the planning commissions, most of which are still young; and it must always be difficult to evaluate what a planning body has done. I have heard of cases where the opening of a new road has been celebrated and public honour has been paid to the engineers who have built it. It not infrequently happens that everybody has forgotten that the road would never have been built in that particular place but for a plan prepared twenty years earlier by the planning commission. As in other fields, the builder, the man of action, is much more likely to get the credit than the man of thought who planned the whole thing a generation earlier.

CONCLUSION

What can we learn in Britain from American building and planning?

1. *Parkways and express highways.* Shall we be content to allow London to continue to lag hopelessly behind New York? Or shall we develop motor-ways so as to provide facilities equivalent to those in the U.S.A.?

2. Can we not learn to emulate America's fine and imaginative great public buildings: civic centres, railway stations, schools and universities?

3. City planning commissions are growing in America with typical speed: the country is becoming plan-minded. There is a ferment of vigorous thought and controversy. The work of these commissions is worth serious study.

CHAPTER XXI

ZURICH AND STOCKHOLM

ZURICH AND STOCKHOLM, both of which I have visited on several occasions, are two of the most attractive cities I know; a consideration of the amenities they offer and the reasons for them may help us in our long-term policy in considering what is the best size of city for educated human beings to live in: something between the limits of 5,000,000, as deliberately chosen for Moscow, and 30,000, the ideal advocated by Sir Ebenezer Howard?

Zurich has great natural advantages. It lies at the end of a lake, between two ranges of mountains; two beautiful rivers flow

through the centre of the town, which is surrounded by fields and forests. Those who built the town took good advantage of these natural opportunities. It is on the whole well planned and well built. The buildings generally are well designed and well arranged. Even the slums are picturesque.

The area of Zurich is about 20,000 acres, of which 30% consists of open spaces. There are many pleasant woods both inside the city area and just outside. The town is situated at the end of the lake, and there are villages right along both sides of the lake for a distance of over ten miles, all of which are practically suburbs of Zurich, though mostly not included in the city area.

There are several very attractive residential quarters for the well-to-do, generally with fine views over the lake and hills. Transport from residence to office or works is excellent, rarely requiring over fifteen minutes. The parts of the town in which the workers live are also pleasant and green; since the last war a considerable number of housing estates have been built rather on English lines. Many of the workers live on the shores of the lake, and come to their work in Zurich on the national electric railway. A worker living seven miles out pays only 7s. for a monthly contract for his daily journeys to work.

The government of Zurich is very different from anything we know. There is a large Council elected by proportional representation, and in addition a very powerful executive of nine persons, also directly elected by the people by proportional representation. This executive is responsible for all administration; and the quality of the personnel is high, in spite of the fact that the salaries of the members amount to only £650 per annum—surprisingly low even in Switzerland, a country of low salaries. Another striking difference is that all important measures are submitted to a referendum of the people, and so educated and responsible are the citizens, that the popular votes are sensible and good.

An outstanding example of this is the interest taken in the cultural life of the city by the public and by the Council, which gives sums of £7,000 and £8,000 per annum to the encouragement of music and painting, guarantees the rent of the theatre, and actually contributes £25,000 a year to the maintenance of the opera-house: a total of over £40,000 each year from the municipality towards different forms of art. Some years ago there was a referendum as to the subsidy to be paid to the opera. The citizens voted for the increased grant of £25,000 per annum by a majority of nearly two to one! In this country we can only envy the interest of the people of Zurich in culture and

their sense of responsibility as citizens, and hope that before too long we may approach their standard.

And there can be no doubt that the government of the city is efficient. The municipality owns and operates the ordinary trading undertakings: gas, electricity, trams and water. In 1938 it made a net profit of no less than £600,000 out of these enterprises taken together.

The factories are scattered throughout the town. The power used is entirely electric, and many of the factories are heated to a large extent by surplus electricity. For an industrial town Zurich is almost unbelievably free from smoke and grit.

In short, Zurich is beautiful, healthy and convenient; in many ways a model city. But the Council are far from satisfied. They intend to make it much better than it is, and are prepared to spend money freely in planning out the best lines of improvement.

The Town Planning Department, which has no executive functions, but the whole of whose energies are devoted to the working out of plans, has a staff with salaries totalling £12,000 a year, an astonishingly high figure when compared with any English city.

A professor who now lives in England and has worked in several other countries regards Zurich as the most attractive town in Europe to live in, both for the educated classes and for the workers. It has varied industry, two good universities and excellent schools, facilities for every kind of recreation and culture, and is full of interesting people.

In spite of all this, the citizens of Bern are far from regarding Zurich as the ideal city. Bern has certain advantages in being the capital of Switzerland. It is much smaller than Zurich, with a population of only 120,000. It is as beautifully situated, as clean, and as attractive a residential town as Zurich, but has the disadvantages which follow from being smaller and rather poorer, e.g. less excellent concerts, theatres, etc. On the other hand, it has the advantage that, owing to its small size, its beautiful woods and the surrounding country are more easily accessible to the whole of the residents. For instance, there is a very pleasant open-air bathing-place on the banks of the river. It is run by the municipality, is free to all, and very cheap meals are served. Owing to the small size of Bern, a large proportion of the young people can get to the bathing-place in a few minutes from their places of work. When we visited it at lunch-time on a warm June day there were over a thousand persons lunching, bathing and sun-bathing.

The Bern residents I met were unanimously of opinion that

Bern is a better town to live in than Zurich. They are very proud of its history; it is more beautiful and is more genuinely Swiss. When one suggests that it is too small, they retort that a generation ago, when the population was only 50,000, its cultural life was perhaps even better than it is to-day.

There are many towns in Switzerland smaller than Bern which have a real cultural life of their own. On the other hand, there are in many countries, and unfortunately in parts of England, cities larger than Bern that have nothing distantly comparable to the civic pride and culture of that city.

There is, I think, one conclusion we can draw from the Swiss cities. The Swiss, owing to their old democratic traditions, their institutions and their educational system, have a more active and widespread interest in political affairs than any other country, and have a very high general level of culture. Switzerland, a poor country, with a population of three million, has 10,000 university students. The industrial area of south-east Lancashire, with a larger population, has about 3,000 university students. There is not much doubt that, owing to the wide spread of culture and the more general demand, everything that is necessary for an educated life, with wide and varied interests, can be achieved in a town of substantially smaller size in Switzerland than in the England of to-day.

STOCKHOLM

One of the cities which would compete most strongly with Zurich for the honour of being the pleasantest residence in Europe is Stockholm. It is a lovely city; so much so that it aroused Clough Williams Ellis to the following lyrical praise. He says a city ought to be a fit setting for a civilised life, and adds:

"Sweden's capital seems to me to be such a setting, and indeed I myself put it above every other city whatsoever. . . . Stockholm has no squalor, no shameful hinder parts, and very little unnecessary ugliness, whether industrial or other. . . .

"No one, I think, could visit the new Town Hall at Stockholm without feeling that it proclaimed and made manifest, not only the just pride of the loveliest city in the world, but also the renaissance of its people.

"In it are employed and displayed and combined into one uplifting masterpiece all the fine and applied arts of modern Sweden—a great orchestral symphony conducted through a thousand intricate passages to a noble conclusion by its designer. . . ."

Stockholm owes much to nature. The site is an ideal one; the city is built on islands surrounded by lakes and rivers. There are no other cities near at hand. Any amount of good building land is available, almost the whole of it covered by forests, which make a perfect setting for suburban development.

Farther afield is the famous Stockholm archipelago, consisting of thousands of islands, ideal spots for summer houses or for expeditions during the week-end, or even in the long summer evenings.

But man has played his part too. The people are careful not to spoil their beautiful city. Everything is clean. Disfiguring advertisements are so strictly controlled that they do little harm, and one rarely sees litter.

The population is just over 500,000; including the surrounding areas, metropolitan Stockholm has about 700,000. The Inner City is built in the usual continental style. Apart from the fine buildings, such as the King's Palace, the superb Town Hall, and many other public buildings of all kinds, the dwellings consist mainly of six- to eight-storeyed buildings. Separate houses for single families are almost unknown. The planning of the Inner City does not present points of any special interest from the English point of view.

Stockholm is developing some very attractive suburbs, especially Bromma, which has an area of 5,000 acres and a population of 40,000 persons. It is a beautifully wooded district, almost surrounded by broad straits, and makes a most attractive residence for persons of all classes.

Not content with this, Stockholm has purchased large areas of well-wooded and watered country up to ten or fifteen miles from the centre of the city. About 1937 it bought a beautifully wooded area of about 3,000 acres to be developed for camping and week-ends. Later it purchased a large peninsula, with no less than 35 miles of indented coast, also for holiday purposes. A large proportion of Stockholm citizens, including many of the working classes, own motor-boats, and this new purchase, which is accessible from Stockholm in one hour by motor-boat or motor-car, is intended to provide places for camping and picnicking for all who want them.

Manchester has the attractive Derbyshire hills within equally easy distance, but has so far never contemplated their acquisition. Why does not the City Council buy a few of the glorious mountains and valleys of Derbyshire and run cheap bus services out to them at week-ends?

CONCLUSION

Stockholm and Zurich are both well planned and well built and both have great natural advantages, but their city councils are dissatisfied and intend to make their cities much better. Stockholm spends £20,000 per annum on the salaries of its planning staff; Zurich £12,000. Few, if any, of our English cities approach Stockholm or Zurich in attractiveness. They need planning far more urgently, yet I think it is true to say that not one of them, whatever its size, spent in inter-war days on planning anything approaching what Stockholm and Zurich were spending.

PART IV

PLANNING: BRITAIN

CHAPTER XXII

INTRODUCTION

THE NATIONAL consciousness of the importance of town and country planning is about a generation behind the national sense of responsibility for the good housing of the people. It was not till 1909 that the first Town Planning Act was passed; a tentative and negative measure, to secure as regards a limited amount of land that if development took place it should only take place in certain ways. The Act did not authorise any positive planning by the local authority.

By 1932 public opinion was beginning to be interested in planning, and the Act passed in that year gave increased powers to local authorities. But these were still mainly negative, and the powers of the Ministry of Health, which controlled the local authorities in matters of planning, were "largely those of a quasi-judicial body to secure fair play to owners of property".

The next step was the publication of the Barlow Report in 1940.¹ Its most important recommendations, which were unanimous, have been authoritatively summarised as follows: ²

"They recommended the establishment by Statute of a National Authority for the purpose of making research into, advising upon, and regulating the location of industry; also that the objectives of national action should include (a) the re-development of congested urban areas, (b) the decentralisation or dispersal of industries and industrial population from such areas, and (c) the encouragement of a reasonable balance of industrial development throughout the various divisions or regions of Great Britain, coupled with appropriate diversification of industry."

¹ Report of the Royal Commission on the Distribution of the Industrial Population, Cmd. 6153.

² Report of the Expert Committee on Compensation and Betterment (Uthwatt Report), p. 10.

These recommendations by the Barlow Commission, which were well received by the country, are the first evidence of a strong tendency to demand a positive policy of town and country planning for the country as a whole.

In 1942 came the Report of the Uthwatt Committee, a small body of experienced surveyors and lawyers appointed by the National Government. After elaborate consideration of the history and facts of planning in this country, they make two assumptions on the positive aspects of planning, upon which their recommendations are based. These assumptions are of such far-reaching importance that I quote the essential parts verbatim.

“The first assumption we have made is that national planning is intended to be a reality and a permanent feature of the administration of the internal affairs of this country. We assume that it will be directed to ensuring that the best use is made of land with a view to securing economic efficiency for the community and well-being for the individual, and that it will be recognised that this involves the subordination to the public good of the personal interests and wishes of landowners. Unreserved acceptance of this conception of planning is vital to a successful reconstruction policy, for every aspect of a nation's activity is ultimately dependent on land.”

The second assumption is—

“that the system we regard as necessary for an effective reconstruction, is one of national planning with a high degree of initiation and control by the Central Planning Authority, which will have national as well as local considerations in mind, will base its action on organised research into the social and economic aspects of the use and development of land, and will have the backing of national financial resources where necessary for a proper execution of its policy.”

These assumptions clearly imply that not only landowners, but also owners of factories, houses and other buildings must subordinate their personal interests and wishes to the public good, and that local authorities must also subordinate the interests of their special community to the national advantage. The essential conditions for positive town and country planning on a national scale could hardly be better or more authoritatively summarised than they have been in these two assumptions.

Let us proceed to consider what steps have been taken, and what further steps are necessary to fulfil these conditions, and so to give the planning authorities the opportunity to plan Britain on the best practicable lines.

LAND

AMONG ALL THE problems of town and country planning the determination of the best means of controlling the use of land in the national interest is perhaps the most important. Unfortunately, it is also quite certainly the most difficult. In the first place, the problems of land ownership and of valuation are, technically, subjects of staggering complexity and difficulty. The whole matter has been studied by the Uthwatt Committee,¹ the members of which were a very able and experienced group of lawyers and surveyors. The Government in their White Paper on the use of land² give the report high praise.

“The peculiar value of the Uthwatt Report lies in its masterly analysis of the abstruse problems lying at the root of any effective system of town and country planning. The Government are greatly indebted to the Committee for this notable contribution.”

One has only to read the report, and to attempt to understand the more technical parts, to appreciate the difficulties of the problems involved; it is, I think, true to say that only lawyers can understand the elaborate complexities of the legal rights of ownership, only surveyors can understand the complications of the peculiar and artificial system of the valuation of land. Unfortunately, it by no means follows that a group consisting exclusively of experts in two highly technical fields will form the best committee to see most clearly the wider economic and political implications of the problems, and the probable results of the adoption of their proposals. A good economist and an experienced town clerk might have helped to produce a report which would have been more likely to be acceptable to the Government, and to achieve the objects desired in practical application.

It would be difficult enough to arrive at an agreed solution of these problems if the discussions were carried on in an atmosphere of academic impartiality. Unfortunately, the rights of land-owners as against the State have for a long time been one of the most bitterly controversial subjects in the whole field of politics. One side allege that all land values are created solely by the community and that they ought to belong to the community; and that in any case values in city centres are preposterously high.

¹ Report of the Expert Committee on Compensation and Betterment (Uthwatt Report).

² “The Control of Land Use,” Cmd. 6537, p. 5.

They point out that it is common for speculators who get wind of an authority's intention to execute public improvements to buy the land at current prices and get away with the betterment when the improvement is made.

The other side point out that landlords have often rendered great services by the way in which they have developed their estates, and that much land has been bought by its present owners at prices based on the present laws. Any changes of law to penalise landowners as compared with other property-owners would be grossly unjust.

These two views have hardened as a result of much party controversy, and it is a matter of the utmost difficulty in Parliament or in the Press to get cool and scientific discussion on the merits of the case.

THE NATURE OF EXISTING DIFFICULTIES

One of the most valuable chapters of the Uthwatt Report is Chapter II—"The Nature of Existing Difficulties". The report analyses the difficulties that local authorities have in securing that land shall be used for the purpose which they consider best in the national interest under the two headings of urban and rural land, which they call "Developed Land" and "Undeveloped Land" respectively.

Under the heading "Undeveloped Land" they state that

"A coastal area, a beauty spot, the fringe land round existing towns, may all have a high building value for residential or industrial development, yet it may be in the national interest to forbid building whether for reasons of amenity or because the soil is highly fertile and suited for agriculture. Similarly, it may be in the national interest to prevent some of our existing large cities from expanding further. This will involve sterilisation from building of much land which, if unrestricted, would continue to command a high price for development. Action such as this is practically impossible under the existing planning legislation on account of the liability placed on the local planning authority for compensating all the landowners concerned for deprivation of development value."

As regards developed land, they stress the importance of this matter by pointing out that half the population of Great Britain lives in cities of over 50,000 inhabitants. They add:

"If the improvement or rebuilding of cities is to be carried out on the basis of a scientifically prepared plan, the planning authority must be in a position to proceed with the single aim

of ensuring utilisation of the land to the best national advantage. . . . It is essential to invest the planning authority with the power to cut through the tangle of separate ownerships and boundary lines, and make the whole of the land in the area immediately available for comprehensive replanning as a single unit."

But they go on to say:

"The compensation or purchase price payable for the land of each individual owner has to be determined by reference to its most profitable potential use. Moreover the price of land in the big cities runs into very high figures. The effect is usually to make it impossible for the local authority concerned to carry out desirable improvements or impose any effective control of user with the limited resources at their command."

It would be difficult to imagine a stronger statement of the difficulties that face local authorities in attempting to plan under present conditions. It must be remembered that the report is written by experienced and leading authorities, appointed by a predominantly Conservative Government; it is not a report by a committee of the Labour Party. And yet the Committee, having studied what the aims and actions of local authorities should be, proceed to say that as regards undeveloped land such actions are "practically impossible", as regards developed land they are "usually impossible". In view of these emphatic conclusions and of the authority with which they are made, it must be accepted that a complete change of the methods of public control of the use of land is essential if the local authorities are to be able to plan effectively.

The recommendations which the Uthwatt Committee make as a result of their analysis may be summarised very shortly as follows.

Developed Land. "Much wider and simpler" powers of purchase for local authorities—at the prices of March 31st, 1939. Also "a periodic levy on increases in annual site value with the object of securing such betterment for the community".

Undeveloped Land.—The purchase of all development rights for the whole of the rural land in the country by the Government for a single lump sum. They suggest that this would work out much more cheaply for the nation than the purchase of individual sites as required under the present system.

The report was very generally welcomed when it was issued in 1942. There was much discussion; opposition gradually appeared to the boldest recommendation of the Uthwatt Report—that for the global purchase of all development rights. The opposition was no doubt strongest among politicians and those who had an

interest in securing the best price for land, but independent experts of the highest standing became doubtful whether, in fact, this proposal if carried out would be likely to result in economy from the national point of view. Here is strong evidence of the technical difficulty of this problem.

The Government, after no less than two years' consideration, issued simultaneously a Bill¹ dealing with the purchase of land, and a White Paper (Cmd. 6537) discussing the whole problem of compensation and betterment. Although they give the analysis of the Uthwatt Report very high praise, they reject its proposals. The Explanatory Memorandum to the Bill starts with an encouraging paragraph about empowering Local Planning Authorities to acquire land by a "simplified and expedited procedure". Unfortunately, however, the local authorities take the view that the Bill in fact does exactly the reverse. It proposes different procedures for three different kinds of land: blitzed, blighted and normal. The local authorities point out that they are replanning the central areas of their cities, and that a plan will often include land which is blitzed, land which is blighted, and land which is neither blitzed nor blighted. Under the Government Bill patches of the land would have to be acquired by different procedures, and indeed under the heading "normal land" two or three different procedures are laid down according to the purpose for which the land is to be acquired. They regard this procedure as being so complex and difficult as to render large-scale redevelopment impracticable.

There can be no doubt that the local authorities are right, and that what is wanted is perfectly simple and exactly what the first paragraph of the Bill says it is going to do. It is essential for good planning that local authorities should be authorised to purchase whatever land they require, for whatever purpose they require it, by a single and simple procedure. It is difficult to imagine anything worse than the proposals of the Bill for this purpose, and it is deeply disappointing that the Ministry of Town and Country Planning should have been willing to sponsor the production of such a Bill.

The financial provisions of the Bill are confined to a grant which will not amount in total to more than £50 million towards the purchase and development of blitzed areas. This is almost ludicrously inadequate, and unless the Government go very much further, redevelopment of the central areas of the cities on any adequate scale will be totally impossible.

As regards the question of compensation and betterment, the Government reject the Uthwatt proposal and make in the White Paper certain proposals of their own. After describing these pro-

¹ Town and Country Planning Bill, 1944.

posals they make the following very important statement of intention: "The payments received in betterment should, over a reasonable period of years and over the country as a whole, provide a fund adequate to pay fair compensation. The processes of planning and development in all their aspects will, therefore, be so managed as ultimately to secure such a balance."

On first reading, this sounds satisfactory, and optimists may well hope that it means that compensation will become available in such large quantities as to make bold planning possible. But there is a widespread fear that it means nothing of the sort, and that, on the contrary, it means in reality that the Treasury is in control and determined that no compensation shall become payable unless and until funds from betterment are available to meet the claims. If interpreted in this way, the Government proposals would kill effective planning.

This pessimistic view is supported by the Uthwatt Report, according to which a balance of betterment and compensation is impossible of achievement under the existing system of land ownership. The report states (p. 23):

"In theory, compensation and betterment should balance each other. In practice they do not. The present statutory code is limited in operation and is not designed to secure balance, and we are convinced that within the *framework of the existing system of land ownership it is not possible to devise any scheme for making the principle of balance effective*. It is only if all the land in the country were in the ownership of a single person or body that the necessity for paying compensation and collecting betterment on account of shifts in value due to planning would disappear altogether."

Here we have the Government and the Uthwatt Committee flatly contradicting one another as to the possibility of balancing compensation and betterment under the existing system of land ownership, which the Government state emphatically that they propose to maintain.

The position may be summarised as follows:

1. The Government, having appointed the best experts they could find in this field of the control of the use of land, accept and warmly praise their analysis of the difficulties.
2. The Government reject the Uthwatt proposals apparently partly on political grounds and partly because they believe that the practical difficulties of carrying them out would be formidable.
3. The Government Bill, introduced for the purpose of enabl-

ing the local authorities to purchase land under suitable conditions, is violently objected to by the local authorities, who are convinced that it will not achieve the results which the Government promise.

4. The Government believe that they can secure a balance between compensation and betterment under the existing system of land ownership; Uthwatt flatly denies it.

These conflicts of opinion as to the best methods to adopt and as to the results that will ensue from these methods are startling. A long study of these complex problems, and particularly the results of discussion since the publication of the Uthwatt Report, have driven me to the conclusion that there is no satisfactory solution except the nationalisation of the whole of the land in the country. The Uthwatt Committee state (p. 27) that "as an academic exercise, public ownership would present the logical solution"; but they do not regard it as "practicable as an immediate measure, and we reject it on that ground alone". Reading between the lines, this looks as if some at least of the members of the Uthwatt Committee believe that nationalisation is the right solution, but do not think it wise to advocate this at the present stage.

The Committee are probably right in taking the view that nationalisation is not immediately practicable, but there is no doubt that public opinion has moved a long way in that direction. There is general agreement now that local authorities must be given better facilities for buying land. The powers local authorities have had to purchase land in the past have been ridiculously limited, and the Government have constantly discouraged the use even of such powers as they had.¹ Many people now believe that it is urgently and immediately necessary that local authorities should have power to buy (compulsorily if necessary) at a reasonable price and to get possession quickly of any land, whether inside their own area or outside,² which in their opinion it is to the public advantage to purchase.

Cities in other countries have long had that power, many have exercised it on a large scale, I have never yet heard of any disadvantage; on the contrary, they have in many cases been able to plan their cities far better and they have even made substantial profits on the land they have bought. If our local authorities are to develop confidence and initiative, they must be trusted and encouraged. The Government should leave the responsibility for the purchase of land on the shoulders of local authorities, inter-

¹ See Chapter XXVIII, p. 200.

² The power of compulsory purchase would in each case, of course, be subject to the approval of the Ministry of Health.

fering only on rare occasions when there is reason to believe that it would not be to the national interest that some particular piece of land should be purchased by the authority.

The great plan for the reconstruction of Moscow and its rapid progress in pre-war days would have been an impossibility under our system of private ownership of land.¹ In this country thousands of highly skilled lawyers and surveyors devote their time to studying and fighting out cases as to the exact rights of an individual landowner and the compensation or price he should receive in connection with a piece of land. When the land is nationalised all these able people, whose time is now completely wasted from the national point of view, will be set free for constructive work.

My own conclusions are therefore as follows.

That the only satisfactory solution of the land problem is national ownership of all land in and around cities.

That at present this is politically impracticable.

That local authorities should immediately be given the widest powers to purchase compulsorily, at a reasonable price, whatever land they may desire to purchase, whether inside or outside their own boundaries.

That the experience so gained should be used as soon as opinion is ready to complete the nationalisation of the whole of the land.

That not until the land has been nationalised will planning on the imaginative scale of the Moscow plan become possible in this country.

That it is impossible to balance compensation by betterment, and that it is therefore essential that substantial sums should be made available from the national Exchequer to assist the local authorities in providing the necessary compensation for the sterilization of land for public purposes.

CHAPTER XXIV

ROADS

THE GROWTH IN the number of mechanically-propelled vehicles in the inter-war period raised many acute problems which will have to be dealt with after the war. Deaths on the road have shocked the public conscience. *The Economist*² calculates on the basis of 1939 figures that one out of every 120 persons born must expect to meet death on the roads, and every third one born must expect to be injured on them (leaving out of account the fact that some persons will sustain several injuries

¹ See Chapter XVIII, p. 129.

² August 19th, 1944.

in their lifetime). Our main roads are far behind the great motor roads of America and of Germany; the congestion in the cities, and especially in London, had by 1939 become exceedingly serious.

Whereas in this country before the war 4·8% of the population owned a car, in the United States the figure was 29%: they had just six times as many cars per hundred of the population as we had. It is generally thought that development of the use of private cars in Britain was so much slower than in America mainly on account of the very heavy horse-power tax on the car itself and the tax on petrol. In most American states the cost of keeping a car was incomparably smaller than here.¹ The table in the footnote shows that the cost of running a Ford V-8 10,000 miles in a year is nearly three times as much in this country as in an average state in the U.S.A. Since money incomes in the United States are about double what they are in this country, this means that it took five times as large a proportion of a man's income to run a Ford V-8 here as it did in America. Even to run a 10-H.P. car 10,000 miles in a year in this country cost about 50% more than to run a Ford V-8 in America, or three times as high a proportion of the average owner's income.

Many motorists have strong feelings that the motor-car is unfairly taxed in this country as against other methods of transport, and there has been and is strong pressure to get this taxation reduced or altered.

It is vital to planners to have some idea as to whether Britain is, say, ten years after the war, to have the pre-war number of cars,

¹ *Cost of Running a Ford V-8 (based on an annual mileage of 10,000).*

AMERICA (average state).

	£	s.	d.
Tax	4	0	0
Insurance	10	0	0
Driving licence		10	0
Petrol at 11d. gallon	25	0	0
Oil at 6s. gallon	4	0	0
	£43	10	0

BRITAIN.

	£	s.	d.
Tax	37	10	0
Insurance	18	0	0
Driving licence		5	0
Petrol at 2s. 1½d. gallon	59	0	0
Oil at 7s. 2d. gallon	4	10	0
	£119	5	0

or whether we are likely to make any approach towards American numbers. The planning of roads, both in the country and in the cities, and the provision of car parks, would be major problems if cars developed on the American scale. And what about garages or parking places on municipal housing estates? In the inter-war period it was assumed that a working man never had a car, and no accommodation was provided on local authority estates. Now opinion is changing: the L.C.C. has already announced that it is going to build garages for one-third of its larger houses on certain estates. The whole planning of housing estates would be altered if it became usual for the working man to have his own car, as is the case in the U.S.A. This matter is so important that I have included a short summary of the arguments on the one hand for a great increase in private cars, and on the other hand for the development of public transport.

THE MOTORIST'S CASE

Many motorists feel a keen sense of grievance on account of what they regard as the excessive taxation of the motorist and the inadequate amount of money spent on roads. The strongest arguments for reform are perhaps in connection with the City of London. Colonel Mervyn O'Gorman, writing in 1939, put the case as follows:

"The life of London depends on road circulation, and that circulation is sluggish. Her 2,300 miles of road are congested and ill laid out. . . . During the last 33 years public disquietude led to eight official reports and committees. London has disregarded their recommendations in the hope of a solution on the cheap. Restrictions, punishments and admonitions are cheaper than road-building. . . . The excuse has always been economy; the outcome has been inefficiency and waste; the reason has been lack of foresight. Recently the authorities have had for their guidance Colonel Bressey's street plan for London, as a result of three years' study. . . . The capital sum for the Bressey plan is between £160 million and £230 million; delays and hold-ups are estimated to be costing Londoners £20 million a year.

"In other lands cities glory in their capital. Nothing is too good for their Rome, Berlin, Paris or New York. They have great roads and streets. They created them by brave schemes of planned demolitions and rebuildings. They are still at it. Only London weakly tinkers with localised widenings."

Sir Charles Bressey, who was responsible for the last of the eight recent reports on London traffic, asked in 1943: "How

long will it be before we carry out the schemes, now eighty years old, for extending the Thames embankments? Napoleon I declared that when he captured London he would provide it with proper embankments!"

Sir Charles goes on to discuss the wider question of our national highways. Talking about the need for motor-ways, he does not use America or Germany to say that we are backward, but actually Mexico. He points out that the advantages of the motor-way are widely recognised in other countries.¹

"The movement has spread as far as Mexico, where motor-ways are now being introduced by the Government. The attitude generally adopted by British highway authorities has been marked by hesitation and inaction. At any rate no motor-way has been built in Great Britain, and it has been the general policy of highway authorities to place their trust in the widening and re-alignment of existing roads, most of them dating from centuries when pack-horses and lumbering stage wagons were the characteristic means of travel. It is remarkable that any measure of success should have attended the transformation of these narrow devious tracks into highways for modern transport, but the sacrifices which this process of modernisation has entailed are very heavy. How many villages and hamlets have been irretrievably mutilated by the widening of a street at the expense of cottage gardens, village greens and roadside trees?"

The failure to tackle our road problem on a larger scale is due to the diversion of the proceeds of motor taxation to other purposes. This has been forcibly pointed out by Mr. Rees Jeffreys in a recent memorandum, extracts from which are reprinted as Appendix III (p. 239). Mr. Jeffreys deals with the inequity of a tax, not on the profits, but on the turnover of road transport, so vital to industry, which heavily increases costs. He points out that in 1939 the yield of motor taxation was nearly £100 million.² On the other hand, the expenditure, nationally and

¹ See Chapter XX, pp. 147 *et seq.*

² Mr. Rees Jeffreys' estimate of the Yield of Motor Taxation in 1939.

Net direct taxation paid by motor vehicles	£35,608,000
Net fuel tax	51,600,000
	87,208,000
Net yield of import duties	1,347,000
Local rates paid in respect of motor garages	10,120,000
	<u>£98,675,000</u>

locally, on the maintenance, improvement and construction of roads and bridges in Great Britain (excluding loan charges) amounted in 1937 to £58 million, out of which under £3 million was on new construction.

He adds that roughly speaking the taxes on motor vehicles and motor fuel now yield 50% more than the total amount spent on the maintenance, improvement and construction of roads and bridges.

Under the system approved by Parliament in 1910 the proceeds of the motor taxes were ear-marked and carried to the Road Improvement Fund. Now they are retained in the Exchequer and the payments out of them to the credit of the Fund are determined by discussions between the Treasury and the Ministry of War Transport and are subject to an annual Parliamentary vote.

Appendix III quotes from Mr. Jeffreys certain constructive proposals about taxation, and for the complete reorganisation of the Ministry of Transport.

It is interesting to note that Congress in the United States has just authorised the appropriation of £1,500 million in Federal aid for the highway programmes of the states over three successive post-war years. This means that the Federal Government will spend £500 million a year on roads and receive nothing in taxation either from motor-cars or petrol. An astonishing contrast with the actions of the British Government.

The motorist's case may perhaps be summed up as follows :

(a) That it is desirable that everybody who wishes to own a car and who can afford the reasonable costs, should be able to do so, just as in the United States.

(b) That owning a car is made unreasonably expensive by the very heavy taxation, a large proportion of which is used for general national purposes. It is unfair and undesirable that transport should be taxed in this way.

(c) Taxes should in future be on a fair basis and should be spent entirely on the upkeep and development of the roads.

(d) This would cause a substantial reduction in the cost of transport, to the benefit of industry as a whole, and would mean a great increase in the number of private cars, to the advantage of many people both for purposes of business and of pleasure.

(e) Motor-car exports are likely to be essential to the national economy after the war. Great Britain cannot compete with the U.S.A. in the export of private cars unless it has a large home market. This can never be the case so long as the present scale of taxation persists.

PUBLIC TRANSPORT

Other people take the view that there are already too many private cars in the cities and on the country roads, and that it would be better if public transport by motor bus could be developed on a much larger scale. Some would go so far as to hold that in the general interest, even at some inconvenience to the richer members of the community, the number of private cars used for pleasure purposes should be reduced rather than increased. They point out that one bus will take as many passengers as five or ten cars,¹ and that it has in addition the following advantages:

(a) It is much safer. Not only are the numbers far less, but the drivers are professionals who are submitted to rigid tests and in the case of the leading transport companies must be not only good drivers but must not touch alcohol before driving. They drive at reasonable speeds. The companies cannot afford accidents, and take all reasonable means to avoid them. On the other hand, there are always a certain number of reckless and irresponsible private owners who cause accidents that would be unthinkable with public vehicles.

(b) Parking is already a nuisance in the towns. If the number of cars increases greatly, it will not only be very expensive but will upset the whole planning of our cities.

(c) It is much more economical in first cost and in running costs to run a limited number of motor buses rather than a much larger number of private cars.

(d) The habit which prevails in some countries of making a

¹ The following table has been supplied by the London Passenger Transport Board:

Type of vehicle.	Length.		Width.		Road space occupied.	No. of passengers.	Road space per passenger.
	Ft.	In.	Ft.	In.	Sq. feet.		Sq. feet.
Bus . . .	26	0	7	6	195	Full 56	3·5
						Half-full 28	7·0
						Quarter-full 14	14·0
Private car .	14	8	5	8	83	Average 1½	47·4

Notes.—A standard type of vehicle has been taken for buses, and for private cars the average of six popular types.

During the periods of serious congestion in the centres of cities the buses would in general be full or nearly full. Under these conditions, where relief is most important, the above table would indicate that each bus passenger requires only one-tenth the road space required by the private car passenger.

car almost more important than one's home and of constantly driving from place to place is not to be encouraged. It is entirely bad from the point of view of the upbringing of children.

In short, the motor bus is comfortable, convenient, safe and economical; there is already a reasonably good service both in city and in country which could easily be developed. The private car used in large numbers is a public nuisance and a public danger. It is right that those who use it for pleasure should pay heavy taxes. The roads in our small and beautiful country are already more densely filled with traffic than those of any other country. To make immense straight motor-ways like the American ones would serve no business purposes, would be very costly, and would ruin the countryside. There is everything to be said for pursuing steadily the policy of the past: developing public transport on the most efficient and convenient lines, and improving the road system, especially in and near the great cities. The road system in the country needs little improvement. It is already quite easy to average 35 miles an hour over long distances; there is no reason why anybody should ever be allowed to average more than that.

CONCLUSION

Which of these two is the right policy? The two alternatives are vividly illustrated by London and Los Angeles. London has a good public service of surface railways, tubes, and buses running far out into the country, which was steadily improving under the difficult conditions of London as planned in pre-war days. Los Angeles, which has almost entirely grown up in the last generation, has a population of one and a half million and almost no public service. Every adult must own one or more cars; there is one car to every 2.3 persons. But Los Angeles sprawls over an area of 450 square miles, and there is no room in Great Britain for cities of that sort.

It is essential for planners to make some estimate now as to how wide the roads must be and how much parking space is required. These estimates depend entirely on their guess as to the number of cars in the country twenty or thirty years hence. It is understood that in making their plans some local authorities have estimated double, others treble, the pre-war number of cars. The ultimate number depends partly on public opinion, partly on Government action. Nobody quite knows what public opinion is to-day, and nobody can guess what it will be in ten years. There are strong interests on the two sides, the railways

on the one hand and the motor vehicle organisations on the other, whose opposing propaganda may have an important influence on opinion. But one thing seems pretty clear: the Government has at present no intention of reducing the total taxation on petrol and on motor vehicles, and so long as the running of a car in this country costs the owner three or four times as much in proportion to his income as it does in America, any approach to American figures is out of the question. It is dangerous to prophesy, but taking everything into consideration it seems that within the next generation there are not likely to be more than twice the number of cars on the road that there were in 1939. It is admittedly impossible for the Government to give any guarantees in the matter, but in view of the fact that local planning authorities must act on some definite assumption, it is only fair that the Government should now take the responsibility of giving some guidance in this vital matter. Planning in a democracy is a very difficult thing!

CHAPTER XXV

THE SIZE OF TOWNS

THE GENERAL DEMAND for decentralisation is based on the idea that our great cities are too big and too densely populated. This raises the question of what is the best size of city:

- (a) for a pleasant and healthy life for the people;
- (b) for good government of the city;
- (c) for the efficiency of industry.

Referring first to the foreign examples I have given, the citizens of Switzerland, the best democracy in the world, regard villages and cities, varying from towns with a population of a few thousands to Zurich with a population of 320,000, as pleasant places to live in, as well governed, and as efficient centres for industry.

Moscow is being deliberately planned for a population of five million as the capital of the Soviet Union. The intention is that every citizen shall have a flat in Moscow and a country house in the 30- or 40-mile belt of country which is being reserved for farming and for "dachas" for Moscow citizens. Electrical railways and great radial roads are being built, and when completed the people will get to their dachas quickly and easily. Under the conditions of Moscow I doubt whether anybody would claim that

five million population is too large. In spite of its size and of the fact that the plan is far from completed, we were told that everybody in Russia was so anxious to live in Moscow that it had been necessary to prohibit anybody settling in the city without a special passport.

So far as England is concerned, the garden-city enthusiasts, following the original advice of Sir Ebenezer Howard, believe that a city with from 30,000 to 50,000 inhabitants is the ideal. But many people hate the life of a small city, with its lack of cultural interests and its petty gossip, and much prefer a city of a million like Birmingham, where facilities exist for enjoying all kinds of activities. Indeed, many go further and regard London, with its eight millions living in a city which in many ways is very badly planned, as the most attractive residence in the world. From the point of view of amenity, it is quite clear that there is no optimum size; it is a question of the tastes of the individual and, fortunately, these vary enormously.

A very important factor, especially in a democracy, is that the size of the city must be such as to secure good government. Here we are up against the familiar dilemma that the largest cities can pay the highest salaries and so secure the best officials, and that on the other hand it is exceedingly difficult to interest the citizen of the large city in civic affairs or to make him feel responsibility. This is, of course, partly a matter of tradition and education; the Swiss citizen, whether of a large town or of a small village, takes a far more active interest in local government than the English citizen, either in large or in small towns.

From the point of view of industry, the size of the city again is not a vital factor so long as the city is properly planned. Industries may be highly efficiently situated in a colliery village, in Welwyn Garden City, in Birmingham, or in London. I know of no valid argument that one size of city is better than another from an industrial point of view, nor did the Barlow Commission produce any evidence to this effect.

The largest cities have certainly not regarded themselves as having too much industry. Birmingham, I think, considers itself as being about the right size as an efficient unit; it has no intention to decentralise either industry or population outside its own area. Manchester, the head of the largest conurbation outside London, gave evidence to the Barlow Commission that the conurbation needed more industry, and Manchester itself was trying to induce industries to settle in Wythenshawe. On the other hand, Manchester is now suggesting that owing to overcrowding in the city 150,000 citizens should be rehoused outside its area, probably in a new satellite garden town. This is one instance where a city is

proposing just the sort of thing which no doubt the Barlow Commission had in mind.

Liverpool, the head of the Merseyside conurbation, far from wishing to decentralise industry outside the city, was probably making greater efforts to secure new industries at Speke in the pre-war days than any other city.

There is universal agreement that the central parts of our great cities are too densely inhabited; there does not seem to be any agreement at all that our great cities, or even our great conurbations, are too large either as regards industry or population so long as they are well planned. The only exception to this is London. There does seem to be general agreement that Greater London, which has a green belt about fifteen miles out from the centre, is too large. From the point of view of industry, many workers waste a lot of time and nervous energy in travel; from the point of view of local government, London as a whole is eminently unsatisfactory; from the point of view of the life of the individual citizen, access to the country is difficult; but even here all these difficulties could be greatly reduced or even removed by better planning.

CHAPTER XXVI

THE LOCATION OF INDUSTRY

IT NEVER OCCURRED seriously to anyone that there should be national control of the location of industry till the inter-war years. Then the continuing serious unemployment and distress in the depressed areas became a matter of public concern. Commissioners were appointed and were authorised to spend public money in endeavouring to provide additional employment in the depressed areas by building trade estates and in other ways. A feeling also grew up that London and the other conurbations were too big, and that the continued drift of population and industry partly from the depressed areas to London ought to be stopped and reversed.

As a result of this feeling the Barlow Commission was appointed to consider the best distribution of population and industry, and recommended that a strong national planning authority should be set up to investigate and deal with these problems, on the lines of securing redevelopment of the congested areas of the cities and of decentralising the "overspill", both of population and of industry.

A HUNDRED NEW TOWNS

The most concrete and challenging plan for the decentralisation of population that has been put forward for the whole country is Mr. Trystan Edwards' scheme for a hundred new towns. He made this proposal over ten years ago; he has recently published an interesting and stimulating pamphlet¹ bringing his proposals up to date. Shortly, what he proposes is as follows.

That a hundred new towns should be built, each with a population of about 50,000; thirty-five of them would be on the sea, sixty-five inland. The five million inhabitants would be moved by mass migration to the new towns: two million from the London area, one and a half million from the large provincial cities, and one and a half from the "areas of architectural sprawl".

He makes a most refreshing attack on the garden city and the whole modern movement towards open development. He considers the main function of a town to be to provide "conditions for human sociability, and the only architectural expression of that sociability is the continuous street formation". He hates the twelve to the acre development of semi-detached cottages and looks forward to the ultimate liquidation of nearly all our garden suburbs. He strongly advocates the high-density terrace house which "would not only be a practical alternative to the tenement, but also, by its greater economy and convenience and more dignified architectural expression, would prove to be far more popular than are cottages laid out on garden-city lines". The terrace house, he holds, would represent a reversion to the attractive old English convention of fairly tall urban houses. There would not be the smallest difficulty in designing them at a density of forty to the acre and yet giving ample access to gardens, open spaces and green country. One method which would help would be private yards on the flat roofs. But the essential feature to make the high-density terrace house practicable is the green-wedge principle as against the green belt, which is now so fashionable. He holds the green belt to be an illogical and confused conception:

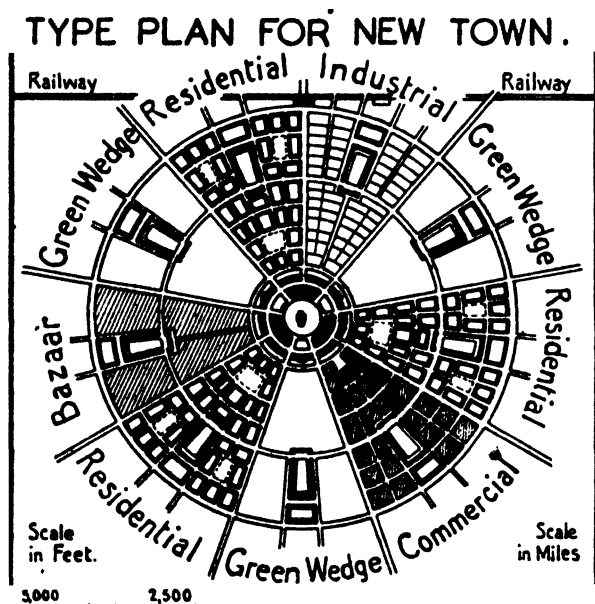
"Either the belt is intended to impose a firm limit to the size of the town so that it cannot possibly expand, no matter how conveniently it may be placed, and thus its effect on the town is that of a stranglehold; or else the belt is gradually pushed

¹ "A Hundred New Towns?", by A. Trystan Edwards (Dent). Further information on the hundred new towns project can be obtained from the Secretary to the Hundred New Towns Association, 1 Broadway, Westminster, S.W. 1.

further afield until, as in London, people have to go nearly an hour's train journey to reach it, in which case it is of very little value."

Fig. IV is a typical plan illustrating the green-wedge principle for a new town; Fig. V illustrates a long-term plan for applying the principle to London.

Mr. Edwards draws attention to the one outstanding advantage of the green-wedge principle: that the various functional zones,



radiating from the principal civic centre, are free to expand naturally and without the possibility of their being enclosed by other zones.

Mr. Edwards proposes that to attract population to the towns "all the buildings, churches, houses, schools, shops, factories, etc., for a population of at least 5,000 should be completed before the first migrants are invited to take up their residence". Further, he proposes that the new towns should act as scavengers of the countryside; "several hundred thousand ill-placed houses on the

ribbon roads and scattered over the countryside could be demolished and their occupants rehoused in compact townships”.

Such is the plan for a hundred new towns. It is full of good ideas: the case for the architecturally attractive terrace house, built at a fairly high density and with easy access to open space, is well argued; the proposals for the adoption of the green-wedge system both in new and in existing towns are impressive and merit very careful consideration. We owe a debt of gratitude to Mr. Edwards for his imaginative and stimulating proposals.



Fig. V

DEVELOPMENT AREAS

But neither the Government nor public opinion are ready to consider seriously any master plan on this imaginative scale. There is only one concrete proposal as regards location of industry for which there is general agreement, that is to develop industries in the depressed areas (which the Government has now renamed development areas), so as to ensure that employment in those areas shall be equivalent to that in the rest of the country.

The Government policy is set out in the White Paper¹ on Employment Policy and in speeches by the President of the Board

¹ Cmd. 6527.

of Trade, who is to be responsible for administering the Government policy in this matter. The general aim is to secure in each area a balanced distribution of industry.

“A region like South Wales in the early '20s, with half its workers employed in getting coal, three-fifths of which was shipped overseas, was dangerously dependent upon foreign trade. Conversely, regions with a wide range of industrial skills, like Birmingham, have been able to see many of their old industries die away during the past half century without losing their general prosperity, because they have had the resilience to develop new activities to replace those which became obsolete.”

The Government propose to strengthen industry in the development areas as follows:

(a) By helping with the “improvement of communications, the extension of power services, the improvement of housing, other amenities and general public services”.

(b) Where practicable, munition factories now situated in development areas will be retained on their present work.

(c) Government contracts will be placed with due regard to the needs of development areas.

(d) Steps will be taken to remove obstacles to the transfer of workers from one area to another and from one occupation to another.

As regards individual firms, any firm contemplating a new factory or a substantial extension must notify the Board of Trade in the early stages. The Board will then endeavour to persuade the firm to develop in whatever area is best from the point of view of the national interest, and will, if desirable, refuse a building licence in other areas. In addition to this, the Government will help firms moving into development areas to secure the necessary capital, and will continue and extend the policy of erecting in development areas factories which can be sold or leased to smaller firms.

There are, of course, many difficulties to be faced. For instance, it is not possible to get in South Wales a balanced industry comparable to that of Birmingham, since coal-mining, and probably the export of coal, will inevitably continue to employ what would, on grounds of balanced industry, be regarded as an excessive proportion of the workers.

In so far as the Government succeed in bringing the level of

employment in any development area up to the average for the country, that area will be removed from the list, and if necessary others may be added. The steps proposed by the Government should be effective, and if steadily pursued this rather limited but important objective of preventing the appearance of depressed industrial areas in different parts of the country and of securing something like an average level of employment in all districts should be achieved.

DECENTRALISATION

The Government have as yet said very little about the broader question of decentralisation of industry and of population. There is a good deal of agreement in theory that the great cities are too large and that the Government should decentralise industry into smaller areas, and of course take the necessary steps to see that the population moves in accordance with the industrial demand.

The London County Council is proposing that half a million of its population should go elsewhere; the Manchester overspill is to be 150,000, and no doubt there will be many others. Where are these people and the factories in which they work to go? The proposal which is generally favoured is either that existing small towns shall expand or that new towns shall be founded. If the department of the Board of Trade on the location of industry gains the confidence of industrialists, it should be possible to secure new industries for suitable small towns by means similar to those which are proposed for the development areas.

The foundation of new towns is a different and more difficult matter. The history of Letchworth and Welwyn shows how slow development of a garden city made by private foundation is likely to be. Sir Theodore Chambers, who is a high authority on this matter and is Chairman of Welwyn Garden City, states:

"I have not the least doubt that independent garden cities are financially feasible. They are commercially sound propositions which do not require the financial assistance of the State. What they require is simply capital and credit and sound business management. One of the mistakes in the past has been their being deemed to require special financial facilities instead of being sound business projects capable of standing on their own."

He states further that:—

"To carry out any plan of urban development to the best advantage it is absolutely essential to own the whole of the land

included in the plan. The main reason for this is that vested interests are the true enemy of sound planning. This term 'vested interest' is sometimes used as a term of reproach, but 'vested interests' are simply something which exist and cannot be ignored. These vested interests are many and various and they are powerful. They include many other things than the mere ownership of the land. They include the vital interest of the local authorities in their territorial boundaries and in their rateable values. They include the assets of insurance companies, building societies, friendly societies and other institutions representing the investments of the capital of all sorts and conditions of people in land and property. They include the interests of religious bodies and the purveyors of entertainment and refreshment. They include the transport authorities, water, gas and electricity undertakings and many other groups who are vitally dependent upon the maintenance of the *status quo*. All these interests cannot be ruthlessly set aside or ignored. Schemes of compensation and betterment charges, however ingenious, cannot be devised to meet the infinitely complex conditions which exist in our built-up areas.

"It is far too little realised that it is not only land values which are enhanced or reduced by changes in the density of population. It is to the open and latent resistance of a host of these vested interests that one must attribute the fact that so little can be done to improve radically the living and working conditions of the mass of our population who live in our cities. This is the reason why we shall continue to go on 'tinkering' with them, making a clearance here, erecting blocks of flats somewhere else, muddling along with the second or third best, but making no radical change in the conditions.

"It is not surprising that a school of thought should have developed amongst those who appreciate these facts, in favour of designing and building new towns on unencumbered virgin areas—where the ownership of the land may be in the single hands of the entrepreneur, and where there are no vested interests to impede and restrict the scientific planning and building of the towns in their entirety."

The Marley Report in 1935 recognised that there were serious financial and administrative difficulties in independent developments such as Letchworth and Welwyn. It is necessary to find a responsible body to promote such a city, and that body would have to receive from Parliament power to purchase whatever land it might require compulsorily and might also require Government support to enable it to borrow capital at low rates. If the manage-

ment was good, all would probably be well, but if not difficulties would certainly occur.

There are three types of authority who have the necessary financial strength to found and rapidly develop garden cities. The Government could, of course, do it; they would in each case have to appoint some competent and suitable corporation to take the responsibility for the actual work.

The great cities could do it. Manchester, with its experience of Wythenshawe, is contemplating the possibility of a second satellite garden town. One or two other cities are considering something similar, but it is understood that neither London, Birmingham nor Liverpool are likely to take any such action; so that the number of satellite garden towns promoted by great cities will probably be very limited.

The county councils could perhaps do it best of all. There are likely to be large increases of population in county areas through the overspill from the great cities. The county councils could plan new garden cities in suitable areas, and could ensure their development on the best lines. They could in addition surround their new cities with a green belt so as to secure that the county council would never lose their rateable value as a result of the new city growing big enough to become a county borough.

It is most desirable that the Government should ensure that at least half a dozen new towns shall be founded immediately after the war, either as satellite garden towns or as separate garden cities. The degree of success of these towns in the next ten or twenty years would be a valuable guide for the future.

METHODS OF CONTROLLING LOCATION

The Government have announced in connection with the development areas the methods by which they propose to influence the location of industry. There are three possible stages, firstly, information and advice to guide industrialists as to the best available sites; secondly, pressure to go to a certain district by methods such as building factories to let, providing cheap capital, giving Government orders, the granting of good terms for gas, electricity, water and transport by the local authority; and thirdly, compulsion. Positive compulsion to go to a certain spot is almost unthinkable in a democracy (except in war-time) so long as the freedom and responsibility of private enterprise continue; but positive prohibition to go to certain places—for instance, prohibition of certain types of factories to go to London—would be regarded as reasonable and almost certainly as desirable.

But even this would be difficult. As is pointed out elsewhere,

Liverpool and Manchester, so far from wishing to extrude factories, were both trying to attract new industries right up to 1939, and will certainly do so again if ever they have serious unemployment. In any case, it must be realised that changes in location of industry must be very slow. The amount of employment given by new factories and extensions each year is small. There is, therefore, no great hurry; indeed, it would be a serious mistake to attempt a definite national plan when the whole subject is so new and so little understood.

The steps which should be taken by the Board of Trade at the present time would appear to be as follows:

(a) To set up a strong research department to study the whole question of the location of industry, in conjunction with industry and with the local authorities and the universities.

(b) To tackle with vigour the development area question on the lines the Government have proposed.

(c) To prevent further industrial development of certain kinds in London and perhaps in other large conurbations.

(d) To encourage the growth of industry in certain suitable smaller towns by the same methods as those proposed for the development areas.

(e) To secure the foundation of at least half a dozen new garden cities or satellite garden towns.

CHAPTER XXVII

THE NEIGHBOURHOOD UNIT

THE NEIGHBOURHOOD unit is likely to prove the most important new idea in city planning since the inter-war days. It is well described and discussed in an appendix to the Dudley Report written on behalf of the Ministry of Town and Country Planning (pp. 58-63). The report points out that "Despite the benefits of continuous technical invention, the life of many town-dwellers is filled with unnecessary difficulties created through an unorganised physical environment—difficulties such as traffic dangers (especially for children), the inconvenient situation of shops, workplaces and open spaces, drawbacks such as noise, polluted air, and so on".

The idea of the neighbourhood unit is to put an end to such unnecessary inconvenience by planning cities as a series of units, each including about 10,000 persons and having an area of from 100 to 500 acres. Each of these units, of manageable size, should

be carefully and deliberately planned as a whole so as to provide for all the residents the maximum of convenience, safety and amenity. The neighbourhood unit is perhaps a natural development from the "twelve to the acre" estate as built after the last war. In the early days we only thought about housing; gradually, as experience was gained, estates were laid out with more and more thought as to the various conveniences and amenities. Now the idea of the completely planned neighbourhood unit has emerged; the Ministry of Town and Country Planning has given a very useful lead, and most local authorities, including London, Birmingham, Liverpool and Manchester, are working out their plans on these lines.

In order to show what the neighbourhood unit is likely to mean in practice, I propose to describe shortly two schemes: firstly, the North-Western Neighbourhood Unit in the satellite garden town of Wythenshawe, Manchester; and secondly, the Duddeston scheme in the central part of Birmingham.

THE WYTHENSHAW UNIT

The North-Western Neighbourhood Unit at Wythenshawe is the first proposed post-war development towards completing Manchester's satellite garden town. For this unit, which is to include a community of 10,000 persons, an area of 318 acres has been selected, all of which is already owned by the city. It is bounded by four major roads; the traffic inside the unit will be limited to the service of the residents in the unit.

There will be 2,700 houses, which will include larger houses built by private enterprise and a variety of houses built by the local authority for large and small families as well as for aged and other single persons. There will be three- and four-bedroomed houses, eight blocks of residential flats for families, three storeys in height, cottage flats with one or two bedrooms, special blocks for aged persons, two storeys high, and blocks for single persons, three storeys high. The size and type of dwellings will be very carefully worked out to meet the needs of the prospective population, which it is intended should be as far as possible a socially balanced group—that is to say, a rough cross-section of the whole community.

There will be a modern school with 17 acres of land, two junior and infant schools and five nursery schools. The schools are so planned as to enable the children to go to and from school in safety without the necessity of crossing main traffic roads or, except in a small minority of cases, even principal internal roads.

There is suitable provision for open spaces. As the City Architect puts it:

"School playing-fields, ornamental parks and spinneys are linked by a field-path system, giving a series of pleasant pedestrian ways through the neighbourhood, and offering scope for the suitable planting of trees and shrubs. Field paths give access to shops and schools and will form part of the complete network of paths covering the whole estate."

The Housing Director reports that

"The layout envisages the development of houses in terraces, open courts and other special features. . . . In the planning of the gardens, it is proposed that individual front gardens be dispensed with so that orderly swards of lawns and planted areas may be encouraged."

The neighbourhood centre is located in a naturally dominating position on high ground. It will include an interesting old hall, a community centre, the main shopping centre, a health centre, a branch library, a church and a public-house. The modern school will also be close to the neighbourhood centre. In other parts of the estate there will be subsidiary shopping centres, churches, public-houses and allotments.

The plans for the Wythenshawe Neighbourhood Unit are an interesting example of the kind of planning which it is hoped may be widely used in the outer parts of cities where plenty of land is available. Since Manchester proposes that this unit shall be its first major development, it is probable that it will be among the first neighbourhood units in the country to be completed.

THE DUDDESTON REDEVELOPMENT AREA (BIRMINGHAM)

The redevelopment of a central city area to form a completely planned neighbourhood unit is, of course, a much more difficult problem. An interesting example is the Duddeston redevelopment area in Birmingham, which is described in a report by Mr. H. J. Manzoni, City Engineer and Surveyor. Extracts from this report are published in Appendix IV (p. 243).

This area is typical of the jumble of factories, slum houses, other buildings and railways left behind in so many of our great cities by the rapid industrial development of the last century. It is a triangular site of 260 acres, almost entirely enclosed by railways and a canal; "practically the whole of the property is old and dilapidated, and the area is therefore very suitable for redevelopment as a single and unified scheme".

"The scheme provides for the complete re-planning and re-zoning of the area. Dwelling-houses and factories are segregated,

new traffic and estate roads planned, and two major open spaces are provided." A parkway, 1,400 yards long, is planned through the centre of the area to take fast through traffic, with dual carriage ways, and planted reservations on either side, with no direct access to the highway from the frontage buildings, and subways for the use of pedestrians.

There are now 6,800 houses in the area, of which 5,000 have been condemned as unfit for human habitation, and another 500 are overcrowded. These houses will be demolished and replaced by 4,500 new houses; the estimated population of the whole neighbourhood unit will be 15,000.

One particularly interesting part of the report is an elaborate analysis of the existing population, on which Mr. Manzoni has based an estimate of the number of family units of different types. It is proposed to house in the area a complete cross-section of the present population, and Mr. Manzoni proposes a variety of types of dwelling so as to have a suitable dwelling for each family that is likely to live in the area. Details of this very interesting proposal are shown in Appendix IV.

This is a remarkable contrast with the usual inter-war municipal estates; owing to the shortage of three-bedroomed working-class houses, the local authorities were forced to concentrate on this type and to get as many large families as possible into their estates. The result was that in the early years the estates had far more than their fair share of children. In some cases the number of children per thousand of the population was double the average. Then as these children grew up the number of children on the estate fell to less than the average. It is clear that such planning gives the local education authority an impossible task in trying to provide suitable schools. The method proposed by Mr. Manzoni is, therefore, a development of importance. There will be all sorts of difficulties in working it out. It will never be possible to get exactly the right number of houses of each type for every family, partly because it is impossible to predict the size or composition of all the families in any given area, and partly because it is impossible to move them about as freely as a scientific housing manager would like. But the method is right and will certainly give much better results than what has been done in the past.

The net residential density will be 41.7 dwellings per acre, which will mean the removal of just over 2,000 families from the area.

The factory area will be extended to 54 acres, and should employ a substantial number of the residents. The number of shops is now no less than 778, which is altogether excessive; it is estimated

that about 120 shops will serve the neighbourhood efficiently. About 20 acres of open space is included in the layout; this land will be found largely by the elimination of unnecessary roads.

The usual provisions for all the necessary schools and other buildings are made, and the whole area is planned, just as in the case of the Wythenshawe unit, for convenience, amenity and safety.

Mr. Manzoni states that

“the scheme can only be carried out as a whole, and it involves complete acquisition of all the existing site and buildings, except the industrial premises in the factory areas. It is most important also that all the special buildings should be erected as part of the general development, and not left to some indefinite time in the future. . . . The completion of the scheme cannot be visualised in less than 15 to 20 years.”

One specially interesting thing about Mr. Manzoni's report is that he gives an estimate of the cost of the whole scheme, which is reproduced in Appendix IV. It shows an inclusive cost of no less than £1,700 per family rehoused, and the income is estimated to give a return of only $1\frac{1}{2}\%$ on the capital invested. Assuming that Birmingham can borrow at 3% and that the Government can hardly be expected to subsidise such developments to any substantial extent, this would mean that to develop Birmingham generally on Duddleston lines would impose a very heavy burden on the ratepayers. In this matter everything depends on the rate of interest at which the city can borrow. The Treasury has been successful in keeping the rate of long-term borrowing low during the war; it has been suggested by leading economists that it may be possible gradually to reduce the rate of interest to a much lower level. These are mysteries for the ordinary person, but if the time should come when our cities can borrow at 2%, then redevelopment on the Duddleston lines would present little financial difficulty.

LOCAL AUTHORITIES AND PRIVATE ENTERPRISE

It is interesting to compare the functions of local authorities and private enterprise respectively in planning and building a neighbourhood unit. If we consider a suburban unit such as the one we have described in Wythenshawe, the local authority makes the whole of the plans, purchases the land, makes the roads, provides the gas, water, electricity and main drainage system. The local authority is likely to build the smaller houses and all the public buildings, such as the schools, shops, libraries.

health centres and community centres. The functions of private enterprise are limited to building the larger houses, the factories, public-houses, cinemas and churches.

In short, the local authority does the whole of the planning and erects all the buildings on which there can be no profit, leaving as a rule to private enterprise everything on which a profit can be made, and the churches. In a new estate like the Wythenshawe unit, where there will be no factories, the part played by private enterprise as against the local authority will be a small one. But, in order to ensure the proper development of the estate as a whole, it is essential that the buildings left to private enterprise shall be built, not only in the right place and of the right size, as laid down in the local authority's plan, but also at the right time. This is likely in many cases to be vital to the whole success of the scheme. But private enterprise may not always be ready to do what is necessary. It is, therefore, important that local authorities should have the power, which has already been obtained by Liverpool for its Speke estate, to erect itself whatever buildings may be required in order to secure success.

CONCLUSION

The neighbourhood unit has three main advantages:

1. It is possible in planning a unit with fixed boundaries for about 10,000 persons to make a thorough study of the requirements of each family and of each individual, and to ensure that all these requirements shall be conveniently met within the unit. The unit is a single and permanent whole, and should be unaffected by the growth or decline of other parts of the city. It gives the planner an opportunity of scientific and effective planning for the needs of a community in detail which has not previously existed.
2. The advantages in the way of convenience, safety and amenity should be sufficiently clear from the descriptions we have given of the Wythenshawe and Duddeston units.
3. It is hoped that the neighbourhood unit may do something to encourage the interest of the residents in their own neighbourhood and to revive the old village spirit which has been so deplorably lost in our great cities and in the inter-war housing estates.

Success in the development of neighbourhood units would seem to depend mainly on the following factors:

- (a) The determination of the local authority to do the job.

well, and their willingness to engage and give a pretty free hand to a really good staff of technicians.

(b) The ability of the local authority to purchase suitable areas of land at a reasonable price.

(c) The willingness of the local authority to erect not only the houses but the schools and other necessary buildings of all kinds.

(d) The willingness of private enterprise to build the necessary larger houses, factories, cinemas and public-houses, and the power of the local authority to do this in cases where private enterprise fails.

(e) The power of the local authority to borrow at a low rate of interest.

(f) In the case of central areas, reasonable conditions for the purchase of land and property and for compensation for the disturbance of existing rights.

In conclusion, there can be no doubt that the neighbourhood unit, as it is now being worked out by the Ministry of Town and Country Planning and by local authorities all over the country, is likely to have great importance. Indeed, it may represent almost as big an advance over the rigid twelve to the acre estates of the inter-war period as they in their turn were in advance of the old bye-law houses of the last century.

CHAPTER XXVIII

MANCHESTER

THE BEST WAY to make clear the problems and difficulties which face our great cities is perhaps to concentrate on one and try to show what actions are required by the Government and the locality respectively to make the city what all would wish it to be.

I have chosen Manchester because it is the only city I know well, and because it illustrates, probably as well as any other area, the problems which have to be faced in replanning and in redevelopment. The difficulties which Manchester has to face in replanning the city on good lines are probably greater than those of any other city except London, for the following reasons.

The cotton industry of Lancashire was the first great industry

to develop in the industrial revolution. It grew up in and around Manchester long before anybody had thought of planning. The chaos in Manchester's slum belt to-day is the penalty for the rapid and unplanned development of 150 years ago.

Secondly, Manchester is the capital of a heavily populated industrial area, with a population of over four millions. With the exception of the southern boundary, Manchester is completely surrounded by built-up areas; Oldham on the north-east, Stockport on the south-east, and Salford on the north-west. After the last war Manchester was nine miles from north to south, and about three and a half miles from east to west. When it was found necessary to extend, this was done in the only available direction by including Wythenshawe, which lay on the southern boundary, making the city over twelve miles long but only three and a half miles wide. This is a highly inconvenient shape. And owing to the impossibility of expansion the city is much too densely populated.

Finally, Manchester suffers to an exceptional degree from the smoke nuisance. Lancashire coal is highly bituminous, and not only Manchester itself but the whole of the surrounding district produces smoke on a large scale. Although there has been a good deal of improvement in recent years, Manchester still has one of the smokiest atmospheres of any city in the country.

INDUSTRY AND COMMERCE

In spite of these disadvantages, Manchester is a comparatively good local government area. It is not too large for purposes of easy administration from one centre; the farthest outlying parts except Wythenshawe are not more than five miles from the Town Hall and can be reached in a motor-car in less than half an hour; and yet the business of each of the committees is on so large a scale that it can well afford to maintain a really good staff under a head official of first-class experience and ability.

The development of the industrial and commercial life of Manchester has been remarkable, as is shown by the following facts, taken mainly from the evidence presented by the City Council to the Barlow Commission.

(a) A Commercial Centre

Manchester is the commercial centre for a population of about four millions. In Manchester the Bankers' Clearing House returns for the year 1937 amounted to £566,000,000. This exceeds the aggregate of the clearings at the next three centres in size, namely Liverpool, Birmingham and Newcastle.

(b) Commercial Organisations

The Chamber of Commerce is an influential body linked to the Chambers of Commerce of the surrounding towns in south-east Lancashire.

The Royal Exchange is said to be the world's largest place of assembly for all classes of traders, the main hall accommodating from 12,000 to 13,000 persons, and its members represent many and varied interests. There is also a Corn and Produce Exchange, Stock Exchange and a Coal Exchange.

(c) A Distribution Centre

Manchester is the food market centre for the population within a radius of 10 to 15 miles. It has an ample supply of markets for fruit, vegetable, flower and fish, meat and cattle, together with cold stores, abattoirs and fruit auction sale-rooms.

(d) Railways

The Manchester conurbation is a great railway centre. The tonnage dealt with by the London, Midland and Scottish Railway Company in the area for the year 1937 was 12,284,590 tons.

(e) The Port

Manchester is the sixth port in the United Kingdom, having handled over seven million tons during 1937. The port can accommodate ocean-going ships up to 15,000 tons; capital expenditure on the port undertakings exceeds £20,000,000.

(f) Industrial Estates

The Trafford Park Industrial Estate is the largest estate of its kind in the country and is situate on the banks of the Ship Canal. It houses a large number of divers industries, and employed approximately 50,000 persons in 1938. During the war the number has been much greater.

(g) Public Services

The public services of electricity, gas, water and transport are carried on by the Manchester Corporation within the city, and for areas extending over a considerable distance outside the city. They are large and efficient undertakings upon which the city has spent nearly £40,000,000 of capital. The total income for 1937 was £6,000,000.

(h) Shopping Centre

Manchester is a great shopping centre for the region and provides ample restaurants and places of entertainment for those visiting the city.

(i) *Education*

Manchester is a university city, the number of students on the roll of the University in 1937 being about 2,700, the largest number of any provincial university. It has also many other facilities for education, such as the College of Technology of world-wide repute, the School of Art, the High School of Commerce, College of Domestic Economy, etc.

(j) *Hospitals*

Manchester is a hospital and medical centre for a large region.

(k) *An Information Centre*

Apart from its distinguished local press, Manchester is the printing centre for the north for nearly all the great London papers; the numbers printed in Manchester vary roughly from 50% to 100% of the London print. Manchester has no possible rival as the best distribution centre for the North.

Manchester is also a regional headquarters for the B.B.C.

Concluding its evidence to the Barlow Commission the Manchester City Council stated:

“The main object of our evidence is to show that the Manchester conurbation—and indeed it is true of South-East Lancashire—is equipped for handling much more business than is handled at the present time. The public services of gas, water, electricity, transport and the railway system can meet much greater demands upon them than are being made at the present time. There is a substantial population unemployed for whom houses, schools, places of recreation and amusement are provided, and cultural, social and religious facilities exist to supply this population. It is submitted that any artificial restriction which would prevent expansion of existing industries or the commencement of new industries in the area, which are essential in any area to supply the normal wastage, would have the effect of transferring industry to areas which would need services to be constructed afresh, and thus duplicated, and would tend to prevent the economic recovery of the area.”

It should be noted that Manchester's claim was not for the decentralisation of industry, but for *more* industry in the South-East Lancashire conurbation, though not necessarily in Manchester. The Barlow Commission did not combat this evidence, they simply ignored it in their general, if somewhat vague, recommendation towards decentralisation.

DESCRIPTION OF THE CITY

The city consists of four parts: the business centre, the slum belt, the suburbs and Wythenshawe. The business centre of the city is an area of about a square mile, containing offices and warehouses, the main public buildings and the principal shops and places of amusement. This central area is somewhat undistinguished; Manchester has fine buildings but the streets are narrow and many of the buildings are situated where they cannot well be seen. Traffic facilities in the business centre are unsatisfactory and present a serious problem for the future. Open spaces hardly exist. The business centre as a whole is far from being worthy of the capital of a region with a population of four millions.

The slum belt is a ring of one and a half to two miles deep round the business centre. Eighty thousand of Manchester's 180,000 houses are situated in the slum belt. There is, of course, some good property in the slum belt, and many improvements have been made by the City Council during the last hundred years, mainly by the provision of sanitation and by reconditioning. But nothing has been done to improve the arrangement and planning of the houses in relation to their surroundings. The houses are packed together at fifty or sixty to the acre; they are mixed up with industrial premises, often overshadowed or made intolerably noisy and gloomy by neighbouring mills or works, and the whole area is congested and has never been laid out with any regard to the convenience and comfort of those living in it. It has no parks—only a few small recreation grounds of an acre or two. Apart from these there is nowhere for the children to play out of doors but the streets.

Beyond the slum belt lie the inner suburbs. The houses reach a fair standard, though the districts are often dreary and depressing in appearance. Beyond these come the areas which have been developed since World War I on the usual basis of twelve to the acre, healthy but dull. And finally, still farther out on the southern side comes the new satellite garden town—Wythenshawe.

WYTHENSHAW

Wythenshawe is the first large-scale experiment in satellite garden town building.¹

¹ Speke is another important satellite garden town which is being developed by Liverpool. It is within the city boundary, and Liverpool owns the whole of the land, which amounts to 800 acres. One very important point is that Liverpool, under a local Act of Parliament, has secured the exceptional power to erect, not only working-class houses, but whatever buildings it considers desirable. It has already built 2,000 houses, some with garages; it has received no subsidy, and is letting these houses at an economic rent, that is to say, there is no loss on the houses. It has been more successful than Wythenshawe in

Instead of the gradual sprawling growth which was typical of our cities in the last century, the satellite garden town is deliberately planned by a municipality to cover a large district, including not only houses and parks but also a factory area, so as to preserve permanently all the amenities; the population working partly in the area and partly in the mother city.

As Chairman of the Manchester Housing Committee I was concerned with the early steps towards acquiring the Wythenshawe Estate, and although I ceased to be a member of the City Council in 1925 I kept in close touch with the development throughout the inter-war period. I was accordingly in a position to follow the inside story of the difficulties which had to be overcome in developing the estate; and since, if a policy of decentralisation is to be pursued on a large scale, the satellite garden town is likely to be an important factor, I propose to give a sketch of the history in just sufficient detail to make it possible to draw conclusions for the future as to the conditions for the success of such development.

In 1919 a housing survey of the city of Manchester disclosed an ultimate need of just over 50,000 houses. Since most of these were to be built at twelve to the acre, this meant 4,000 acres of land, and nothing approaching this amount of land was available in the city area. An investigation of the surrounding areas was accordingly made by the city officials, who recommended the purchase of the Wythenshawe Estate of 2,500 acres, which belonged to a single landowner and was contiguous with Manchester on its southern boundary. Since this represented a very large purchase, we asked Professor Abercrombie to report. His conclusions were as follows:

“The Wythenshawe Estate is eminently suitable for a housing scheme, using this term in its widest sense as community planning, and I strongly advise the Manchester Corporation to acquire the estate if the land can be obtained at an agricultural value. . . . To make a financial success, a comprehensive and imaginative plan should be prepared, which will make of this area a model community for the whole country.”

Owing to the fact that the land surrounding Manchester north, east and west was almost fully developed, there was no alternative to Wythenshawe. It was not, I am afraid, that Manchester was

securing factories. Apart from one very large factory, there are about twenty others, some of which were built and let by the Corporation and employ about 2,000 workers. It is hoped that Speke will eventually have a population of about 20,000, and that it may be a complete, self-contained, and balanced unit, employing as nearly as possible the whole of its own workers.

peculiarly far-sighted in purchasing Wythenshawe; it was due to what in other ways is Manchester's misfortune that no other neighbouring rural land was available.

In fact, the purchase did not take place at the time; the estate was bought in 1927 by agreement with the owner. Mr. Barry Parker was instructed to prepare a plan for the comprehensive development of the whole estate; this has been described elsewhere.¹ Suffice it to say here that the whole estate of 5,500 acres was planned for 20,000 local authority houses and 5,000 private enterprise houses, with a total estimated population of 100,000. To appreciate the scale of the plan, this is equal to the sum of the populations of two county boroughs, Gloucester and Chester. The density of the houses varied from a maximum of twelve to the acre down to about four to the acre; there was an agricultural belt; fine parks and parkways, schools, churches and hotels, shopping centres, and a main and subsidiary civic centres were amply provided for. It is fair to say that the plan embodied the best town-planning knowledge of that date.

INCORPORATION

When the Council succeeded in purchasing the Wythenshawe Estate, they were strongly of opinion that for satisfactory development the area ought to be included within the boundaries of the city of Manchester, and in 1927 they applied by private bill to Parliament for this purpose. The Cheshire County Council and the Rural District Council opposed for the usual reasons and the application was rejected by Parliament. Defeated in Parliament, Manchester did its best to get on with the development of the estate, but met with endless trouble. In particular, it was impossible to begin large-scale building without first installing a main drainage system at a cost of several hundred thousand pounds. The Cheshire authorities showed no signs of carrying out this expensive work, and development could not proceed. Manchester again applied to Parliament in 1930 and at last succeeded in getting Wythenshawe incorporated into the city; it was only in 1930 that Manchester was at last in the position of being fully responsible for the estate, both as local authority and as landlord.

LAND PURCHASE

The original estate bought by Manchester was 2,500 acres out of a total planned area of 5,500 acres. The City Council felt from the beginning that in order to obtain the best results and

¹ "The Rebuilding of Manchester", p. 36.

secure the increment value of the land due to the money they proposed to spend in development, it was important to purchase the remaining undeveloped land. But many of the owners felt that if they held on to their land they would within a few years get a better price for it and refused to sell at what the Council considered a fair price.

In spite of this, the city managed by purchase or otherwise to acquire additional land, so that by 1931 they owned about 3,500 acres. But progress was slow, and in that year the City Council applied to the Government for powers to purchase compulsorily a further 1,300 acres. After a local enquiry, held by the Ministry of Health, the application was refused on grounds, it is believed, of "economy"! The City Council went on trying, and succeeded in purchasing before the outbreak of war another 290 acres, needless to say at a much higher price than they would have had to pay if they could have purchased the land before they had increased values by spending millions of pounds on development. Manchester owns to-day about 3,800 acres out of the total area of Wythenshawe of 5,500 acres.

DEVELOPMENT

By 1938 the Corporation had built just over 7,000 houses; private enterprise had built 700. The population was 34,000. There were fifteen small factories, employing altogether just under 1,000 workers. To achieve these results Manchester had spent just over £4,000,000 on the development of the estate, made up as follows:

	£
Acquisition of land	330,576
Estate development (main drainage, houses and shops, streets, etc.)	3,134,832
City services (public buildings, school, etc.)	232,529
Trading services (electricity, gas, water)	384,982
	£4,082,919

CONCLUSIONS

The following conclusions would seem to emerge from Manchester's twenty years' experience in the development of Wythenshawe.

(a) Although effective work at Wythenshawe began only in 1931, it has already a larger population than either Welwyn or Letchworth; correspondingly more money has already been spent on its development. The reason for the difference is that

the Manchester City Council is in a position to provide the two things which Welwyn and Letchworth lack—cheap capital for development in whatever quantities it is required, and houses in large numbers to make the capital remunerative.

There can be little doubt of success in that kind of development so long as enough capital is available at low rates of interest, and development occurs sufficiently rapidly to make the capital invested in such things as main drains, roads, water, gas and electricity, productive without undue delay. Any great city can ensure these two conditions. Nobody except a great city or a county council can ensure them.

(b) But the history of Wythenshawe shows that there are two further conditions which are vital to success. The first is that the city must own the land, or at least the major part of the land. The powers of the city as local authority are limited to such powers as are expressly given by statute, and are totally inadequate to ensure satisfactory development. But the powers as landlord are limited only where actions are expressly prohibited by statute; the landlord can lease land subject to any conditions he likes to impose. It is the landlord power which is enabling Manchester to preserve the amenities of Wythenshawe in all kinds of ways which would not otherwise have been possible.

(c) The second condition is that the city should also itself be the local authority for the satellite garden city. A little consideration will show this to be almost essential. Some services must be provided in advance of building, e.g. roads and sewers; others during the course of the building—especially schools. The city intending to build makes its decisions and has confidence in its own intentions to carry out these decisions; as we have shown, Manchester committed itself to an expenditure of many hundreds of thousands of pounds before a single house was built.

(d) Perhaps the most disappointing aspect of the development of Wythenshawe was the failure of private enterprise to build houses and the small number of factories which were erected. This may be partly the fault of the City Council. The Committee responsible for Wythenshawe was never authorised to appoint a first-rate manager to be responsible to the City Council for the development of Wythenshawe as a whole; this was left to the existing officials of the City Council, all of whom were pretty fully occupied in other directions. Even so, it seems clear that Liverpool was wise in securing powers at Speke to erect factories, larger houses and other buildings rather than leaving it to chance as Manchester had to do whether private enterprise would erect all the suitable buildings required for the full life of the community or not.

Finally, it is disappointing that when a city undertakes a great and novel experiment of this sort, which may be of outstanding value in showing the way for a new and better type of city development, instead of getting enthusiastic help and encouragement on all sides, it should meet, as Manchester did on the questions of incorporation and land purchase, with discouragement or active opposition, not only from the rural authorities, but also from the Ministry of Health and from Parliament.

If this attitude is reversed, if our great cities are not only allowed but encouraged to extend their borders and to purchase land, more Wythenshawes will grow up, and the twentieth century will be marked by the development of a series of satellite garden towns which will be one of its chief glories.

MANCHESTER'S PLANS

In 1919 Manchester City Council had practically no experience of house-building, and only preliminary work had been done on a small scale as regards planning. The Government gave no guidance as regards reconstruction, with the single exception of their report laying down standards of housing. The City Council had no suitable organisation; it proceeded to appoint a Housing Committee, of which I was made Chairman. We knew little or nothing about the work, we had to appoint our staff, to make plans, to purchase land and to let contracts, all under great pressure from the Government to build the urgently needed houses as quickly as possible. We developed estates and built houses in a great hurry and at a great cost, and when they were finished we began to wonder where to put the schools and libraries and the churches and all the other buildings that were needed.

To-day the City Council has had over twenty years' experience of housing and of planning. The difference in the position is most encouraging, it might indeed almost be called revolutionary. It is well brought out in the admirable first report of the Post-War Reconstruction Committee of the City Council, a summary of which is printed in Appendix V (p. 245). The report begins with a frank discussion of the failings of the past, and goes on to indicate that the committees of the Council are already giving preliminary consideration on broad and imaginative lines to the needs of the city, not only industrial and economic, but civic, social and cultural.

The first striking difference is therefore that the City Council is approaching the problem of planning in a constructive way and in a new spirit of determination to make Manchester a fine

city in every way. Further evidence of this determination is given by the fact that whereas Manchester, like all other English towns, had quite inadequate planning staff in the inter-war days, to-day there is a team of able and vigorous engineers, architects, planners and surveyors, working under the leadership of the Town Clerk, and with adequate staffs (so far as staffs are available in war-time) to develop their many and varied plans on effective lines. The expenditure on staff for planning is now, I believe, both in Manchester and other towns, comparable with that of cities like Zurich and Stockholm.

The report of the Reconstruction Committee makes two major recommendations which are of the utmost importance and will have very far-reaching consequences. They are as follows:

1. To adopt a programme of building 75,000 new houses.
2. To build about 50,000 of these houses outside the present area of the city.

The Medical Officer of Health has stated that no less than 68,000 houses are in his opinion unfit for human habitation; this is more than one-third of the 180,000 houses existing in the city, and indicates a big and welcome rise in the standard of what is officially regarded as being a house fit for human habitation. Nearly all these condemned houses lie in the slum belt; in effect, the M.O.H. has condemned the great majority of the houses in this area. On this basis, the Housing Committee has recommended a building programme of 75,000 houses; no time programme has yet been adopted.

The Town Planning Committee has shown great courage in adopting a remarkably low standard of densities. For central redevelopment areas, which will be mainly in the present slum belt and not far from the centre of the city, the maximum density is to be sixteen houses or thirty flats to the acre. The maximum residential density even in the central areas is not to exceed fifty persons per acre.¹

This decision has far-reaching and indeed tremendous consequences. It means that there will be an overspill from Manchester of no fewer than 150,000 persons who will require 50,000 dwellings. This will reduce the population of the city of Manchester from the pre-war figure of 750,000 to 600,000. The overspill will amount to one-fifth of the population, all of whom will have to be moved outside the city. No other great city has, so far as is yet known, adopted so low a density of redevelopment as Manchester; no other city is proposing an overspill so

¹ See Chapter XXIX, p. 216, for a comparison of Manchester's densities with other cities.

large as one-fifth of the population. This is planning with a vengeance!

A REGIONAL CAPITAL

In rebuilding Manchester, housing must of course come first. If the Government's programme of four million houses in about twelve years is carried out and continued afterwards, the slums ought to be cleared in sixteen years.¹ As regards Manchester, this would mean building nearly 5,000 houses a year to complete the 75,000 houses in that period. All things considered, this would seem to be a reasonable programme.

From the national point of view, Manchester's real importance is as capital of South-East Lancashire. In this aspect, what matters is not so much the housing of the population of Manchester, as the services and attractions which the city provides for its region of four million persons. Hitherto, Manchester has not in this matter compared favourably with American towns like Boston, Chicago or San Francisco, German towns like Frankfurt or Munich, or a Swiss town like Zurich.

The major developments needed to make Manchester; and in particular the central city, all that a regional capital ought to be, include improved roads, parking places and open spaces, a dignified civic centre and other well-designed centres for industry and commerce, for shopping, for amusements, parks and stadia, for law-courts, for drama, music and cinemas. Everything depends on the skill and vision with which the new buildings are designed and planned. Let me give three examples of the kind of developments which are desirable.

Manchester has one superb opportunity for distinguished planning. There are four railway stations, old, dirty and inconvenient, all in sordid surroundings. Two of them could be rebuilt as a single fine station. Just outside this station are the Cathedral, a beautiful example of fifteenth-century building with some particularly fine wood carving, and Chetham's Hospital, one of the best examples of fourteenth and fifteenth-century domestic architecture in England. It houses the first free public library in Europe; the building and shelves and many of the books are exactly as they were when the library was opened in 1653. For 500 years the house was a thing of beauty for all passers-by to see; the industrial age hid it behind a narrow fringe of hideous buildings. If these and a few other surrounding buildings were pulled down (many of them have been blitzed) the Cathedral and Chetham's Hospital could stand alone on an island site, in an open space which might be called Cathedral

¹ See Chapter XIII, p. 96.

Square. Appropriate buildings would gradually have to be erected round the square. Passengers coming from the station would find themselves not in a depressing industrial city, but in a pleasant open space with beautiful old buildings. Many American cities have splendid stations with fine approaches; not one of them has historic buildings like the Cathedral and Chetham's Hospital. A Cathedral square on these lines, if really well-designed, would be a magnificent first step towards making Manchester a beautiful and dignified regional capital.

As a second example, there is much to be said for building a skyscraper of, say, forty storeys, designed by the best architects and engineers in the country, as the heart of the civic centre, and as a symbol of the greatness and dignity of Manchester. A single very tall building can be most beautiful and impressive; it should of course be surrounded by ample open space, and no other buildings in the city should be more than ten or twelve storeys high. A great modern civic building of this kind would provide an effective contrast with the ancient buildings of Cathedral square.

A third fine opportunity is offered by Manchester University, which is the oldest, the largest and, we like to think, the best of the provincial universities. The University is more and more building up close contacts with many sections of the community, civic, industrial and cultural, throughout the region. It has some good buildings, and has the advantage of being situated within a mile of the centre of the city, so that it is easily accessible from other parts of the region. But it is built in a slum area. It needs a fine campus of perhaps 100 acres, which would gradually be covered with beautiful buildings, so as to become a meeting-place for all that is best in the region.

Near the University lie our leading teaching hospitals, and a University hospital centre is being planned to include all the great teaching hospitals, voluntary and municipal, and many of the buildings of the University Medical School. The University campus and the University hospital centre should each have a site of about 100 acres. Taken together they will provide a fit setting for a great university.

It is of course essential that the smoke pollution of the Manchester atmosphere should be abolished, to let in sun and air, and to enable men to see the beauty of the buildings.

Good residential districts must be developed to attract people back from the country to live in the city: if Manchester is to be regional capital, it must have a West End, like London and Birmingham and so many continental cities.

The success in attracting people back from the seaside and

from Cheshire to live in Manchester will be the final test of the success of the efforts of the City Council to make Manchester into a real regional capital.

FINANCIAL ASPECTS

What will be the effect on the city's finances of rebuilding the city on these lines, and of reducing the population by 20%?

The rebuilding of the city centre, including the provision of wider roads, open spaces and fine buildings, and the redevelopment of the slum belt on the lines proposed by Manchester will both of them be exceedingly expensive having regard not only to the cost of new buildings but also to the very high land values.

The financial effect of extruding 150,000 citizens from the Manchester area is a new and unexplored subject. Small houses including all the services they involve are a financial liability to the authority in whose area they are built. If, therefore, Manchester could build 50,000 houses outside its area and put all the cost of the services on the county, and if the places of work of the tenants still remained in Manchester, then the whole operation would be profitable to Manchester. But if Manchester should build 50,000 houses outside its own area and provide all the services, and if the rates should go to the County, then the results would be financially disastrous to the city.

The whole question is so novel, Government policy is still so undefined, that it is impossible at this stage even to guess what the financial results of this great migration are likely to be, but it is clear that they may be serious and that the whole matter will require the most thorough study before definite action is taken.

All these proposals are on an ambitious scale and show a fine confidence in the future. They should be practicable on three conditions. The first is that the region must remain industrially prosperous; there must be a high and stable level of employment, the export trade must flourish, and the standard of living must continue to improve. The second is that the city should be enabled to purchase the land it requires, especially in the central areas, at reasonable prices and without undue delay; the third is that the Government should give proper financial help both in the form of capital grants and annual subsidies in all cases where the burden would otherwise be too severe to be borne exclusively by the ratepayers. Given these three conditions, and a continuance of the present determination to rebuild on the best lines, Manchester should within a generation become a magnificent regional capital of which its citizens could be unreservedly proud.

LOCAL GOVERNMENT AREAS

Hitherto I have dealt with the problem of replanning and rebuilding Manchester within its present boundaries. But the boundaries of the various local government authorities round Manchester have come into being almost by chance, and they are totally unsuitable to modern conditions. This can be best understood by considering the facts as to Manchester, Salford, Stretford and the rural districts lying south of them in the county of Cheshire.

Manchester, with its population of three-quarters of a million, has a high standard of services for its citizens; in addition it provides services for those who live in the region; some of these, such as shops and amusements, are profitable, others are a serious burden on the rates—for example, the provision of hospital service and higher education. The most striking instance is the Manchester Ship Canal: Manchester made a loan of five million pounds to secure the completion of the Ship Canal; this meant a burden of 1s. on the rates for many years. The surrounding areas contributed not one penny, but shared equally with Manchester the benefit of cheaper freights and better trade.

Salford, with a population of a quarter of a million, consists largely of working-class property; its rateable value is low, and in spite of a very high rate poundage it has not been able to afford a high standard of services.

Stretford is a pleasant residential area for some of the richer workers in Manchester. It has no slums, it pays no share of the rates required for the poorest parts of Manchester.

Farther south in Cheshire a number of towns have developed, some purely residential, some partly industrial. Many well-to-do Manchester citizens live in these districts. Their rates are much lower than those in Manchester.

LOSS OF RATEABLE VALUE

One result of the migration of industry and of well-to-do citizens to the pleasant surroundings south of Manchester is the transfer of rateable value from Manchester to other local authorities.

The following table shows the rateable value of Manchester in 1928 and 1938 and of the principal surrounding boroughs and urban districts. It will be seen that while the rateable value of Manchester during the ten years has decreased by 5%, that of the surrounding areas has very nearly doubled.

Rateable Value

	1928.	1938.	Increase or decrease.
	Millions.	Millions.	%
Manchester . . .	7.0	6.6	- 5
Surrounding areas . . .	1.1	2.0	+ 85
Total . . .	8.1	8.6	+ 6

The Manchester evidence to the Barlow Commission points out that:

“The industrial areas have almost all declined in population; the areas which are both industrial and residential have maintained their figures, and even show a slight increase, while the residential areas, mainly on the southerly side, have increased their population in some cases to an extraordinary extent.”

There is a very wide disparity between the rates levied in Manchester and the surrounding areas. In 1938 Manchester rates were 16s., the surrounding areas varied from 9s. up to a maximum of 14s. It is fair to say that all these areas were dependent on Manchester; a large proportion of their citizens travelled into Manchester daily; Manchester provided higher education, hospitals and many other services for their residents, towards which the outer areas contributed nothing.

This drift of the well-to-do to the pleasant surrounding country is having a serious and increasing effect on the rateable value of the city.

A SINGLE ALL-PURPOSE AUTHORITY?

Manchester, Salford, Stretford and the north Cheshire towns constitute a single community, at present split up into the central city of Manchester, which contains about two-thirds of the whole population; Salford, with its particularly poor section of the population; Stretford and the north Cheshire towns where most of the well-to-do live.

If all these areas were amalgamated into a single city, it would form an ideal administrative unit, with plenty of space to house all its citizens, present and future, under ideal conditions. Manchester would be a very great city; the dignity and responsibility of the City Council would be enhanced; civic pride would be stimulated among the whole body of citizens. It may be hoped that the very best men and women would consider it an

honour to serve as members of the governing body of the second city of the Empire.¹

There would of course be strong opposition to such a proposal from those who now have a privileged position. But I have not the slightest doubt that this plan would provide the best conditions for the population as a whole. This is the kind of proposal that ought to be considered without delay by a Royal Commission.

SEGREGATION OF LEADERSHIP

One aspect of the recent drift of the well-to-do from the cities to the surrounding country is, I believe, of fundamental importance to the good government of large cities, and indeed to the future success of democracy. In the old days people were born and lived and died in one city. Those who were successful in their careers continued to live in the city and were in close contact with the life of different sections of the population, and became the natural civic leaders. The success of democracy depends on combining the freedom and ultimate power of the common man with good leadership; it depends on the extent to which the ablest people are willing and able to give such leadership as lies within their power, not only in Parliament and in national affairs, but also in the civic, social, and cultural life of the cities.

In the small town, even to-day, the classes are as a rule in fairly close contact with one another. The important people know what is happening in the town and feel civic responsibility; they are brought into contact with the whole life of the community in such a way as to give them what Graham Wallas called the "emotional stimulus" necessary to induce them to take the trouble which is always essential to leadership.

As our great cities grow larger and larger, the classes tend more and more to be segregated. It cannot be denied that our great cities are mostly ill-planned, dirty and unpleasant to live in. On the other hand, modern methods of transport and the shorter working hours have made it easy to live out in the country. Manchester is no better than the rest. The successful Manchester man tends more and more to live in some place set apart for the well-to-do: in the pleasant Cheshire country in the south or at the seaside towns like Lytham and St. Annes, which have an admirable train service to Manchester. Those who live in such places, though they continue their business activities in Manchester, too often lose all sense of public responsibility as Manchester citizens.

The same applies even more strongly to towns like Salford and

¹ "A City Council from Within", p. 220 (Longmans, Green & Co.).

Stockport. They are contiguous with Manchester, and their residents look to Manchester more and more for important services in business, education, health, and cultural life. A Salford leader has called Salford a doomed city; it has hardly any pleasant residential areas, and those who can afford it are leaving the city in increasing numbers; it is inhabited now almost exclusively by the lower-income classes. As a result, the burden of rates is unduly heavy, it is increasingly difficult to maintain a high standard of services, the town tends to become progressively unattractive compared to other towns, and it becomes ever more difficult to find effective civic leadership.

Another factor tending to weaken leadership in the provincial cities is that leadership is increasingly tending to be concentrated in London. London is the centre of social life, of political life, of the civil service, of law, of culture. The best people in every walk of life almost inevitably gravitate to London; the high salaries and profits are in London; power is in London. Anybody who wishes to play a part in the national life is almost irresistibly attracted to London.

The public schools play an effective part in this system. The sons of the rich and the powerful go to one of the great southern public schools. Having been there, they tend to look down on the industrial north, and avoid it if they can.

Oxford and Cambridge have a similar effect; they extract the very best brains from the north by their scholarship system and keep a large proportion of them permanently in the south.

The removal of leaders from the provincial cities to the country and to London brings little civic gain to those areas, because the potential leaders, once they are segregated, lose the emotional stimulus which produces public spirit, and apart from their business or profession tend to lead self-regarding lives in small and exclusive communities.

The consequences of delocalisation of leadership are beginning to be disastrous to Manchester; still more so to neighbouring towns like Salford and Stockport. It is of the utmost importance that every effort should be made to reorganise national and local life in such a way that leadership shall cease to be so heavily concentrated in London; that successful men of energy and personality will be willing to live and devote some of their energies to public service in Manchester or Salford or Stockport.

LOCAL AUTHORITIES

THERE HAS DURING the last year or so been an astonishing outburst of vigorous and imaginative planning by the cities of Britain, specially by those that have been badly bombed. London was the first to issue an impressive and important report by Professor Abercrombie and Mr. Forshaw, well printed and illustrated, which aroused interest all over the world. Plymouth has published a similar volume, as a result of the initiative of its Lord Mayor, Lord Astor. Plymouth has perhaps the most beautiful surroundings of any city in Great Britain, and the plan is drawn on courageous and far-seeing lines. If Plymouth could be rebuilt on the lines recommended in the report it would be a city comparable to the best in the world. Unfortunately, there are two major difficulties; the first is that the surrounding local authorities have refused to co-operate in the report and that the Government have so far shown no signs of helping the large cities to overcome this kind of obstruction, and secondly, the report hardly mentions the word finance. Without a great deal of financial help from the Government the report will not become practical politics.

Many other cities are planning with the same courage and vision as London and Plymouth. Altogether, there is, for the first time since the Industrial Revolution, a strong movement among the city councils towards rebuilding their cities on really good lines.

It is encouraging also that the cities are engaging staffs for planning on quite a new scale. To deal with planning as it is envisaged to-day requires a technical staff including planners, surveyors, architects, engineers of various kinds, economists, statisticians, lawyers and administrators, and it should certainly include a research department. It is understood that in spite of the great difficulty of securing suitable personnel in war-time, several cities have now fairly adequate staffs to deal with these many-sided problems.

DENSITY

In planning a city the fundamental decision on which everything else depends is the density of development. The neighbourhood unit idea has rendered it possible for the first time to compare densities on scientific lines. Density must be considered under three headings:

Residential density, which is defined in the Dudley Report as the average number of persons ¹ per acre of housing area, which comprises the curtilages of the dwellings, access or internal roads and half the boundary main roads up to a maximum of 20 feet, where these are contiguous to residential property. This depends on the number of flats per acre, the number of cottages per acre, the proportion between the flats and the cottages, and the number of rooms in the dwellings.

Neighbourhood density, which is the density in each neighbourhood unit as a whole. This depends on the residential density and on the amount of space allowed in the neighbourhood unit for other buildings, such as schools, shops, public-houses, cinemas, etc., and for open spaces of various kinds. The neighbourhood unit often covers a total amount of land about double the housing area; in that case the neighbourhood density is half the residential density.

The neighbourhood density is a valuable basis of comparison in cases of neighbourhood units which include only buildings for the service of the neighbourhood. The presence of factories or offices, for instance, would invalidate the comparison by reducing the density without improving the amenity for the residents.

Overall density is arrived at by dividing the total population of the city (or other area) by the total acreage, however the land is used. It depends on the one hand on the neighbourhood density, and on the other on the amount of land reserved for the purposes of the city as a whole, which consists chiefly of

- (a) the central area; offices, shops, amusements, etc.;
- (b) factory areas;
- (c) open space.

To sum up, in the words of Captain Reiss,² "all plans should be tested by considering three densities, namely, overall density, residential density and neighbourhood density". Even then, the special conditions of each town must be carefully considered to arrive at a proper comparison; for instance, the overall density may be low owing to a large agricultural belt within the city area, and at the same time the overcrowding in the slum districts may be very bad indeed.

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CHAPTER XXIX

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FLATS OR COTTAGES

During the inter-war years there was a prolonged and vigorous discussion on the question of the relative merits of flats and cottages.¹ This controversy resulted finally in a complete victory for the cottage; public opinion on the matter is now virtually unanimous. But the discussion was almost exclusively based on the relative merits of the flat and the cottage for families with children, which was the only type of house that was being built on a large scale in the inter-war period. Now that the matter is being more scientifically investigated, it is realised that the number of families with children is limited. In the Duddeston Report² it is estimated that only 35% of the families include children; it is proposed that all these shall be housed in cottages; the remainder, two-thirds of all the families, will be housed in flats.

It may be hoped, therefore, that in the future only cottages with gardens will be built for families with children. If there were complete flexibility, that is to say, if a family could be moved in and out of a house so that the size of the house and the number of rooms always corresponded exactly with the needs of the family, then it might suffice to provide only 35% of the total number of dwellings as three-bedroomed cottages. But such flexibility is neither practicable nor desirable in a democratic country; people get to know and love their home, and movement is always costly. Further, it is only if people remain for long periods in their homes that there is any possibility of building up a community spirit in the neighbourhood. Newly married couples should, if they wish, be able to go straight into a three-bedroomed cottage, and spend their lives there. It is therefore most desirable that there should in all neighbourhood units be a much larger number of three-bedroomed cottages than are required solely for the purpose of meeting the needs of the families with young children.

OPEN DEVELOPMENT

In open development where land is cheap, there is not much difference of opinion as regards density; the inter-war figure of cottages at twelve to the acre seems likely to be generally accepted; flats for childless persons will usually be included at a somewhat higher density.

The Dudley Report gives the following as suitable development for a residential neighbourhood of 10,000.

¹ See "The Rebuilding of Manchester", pp. 89-113 (Longmans, Green & Co.).

² See Appendix IV (p. 243).

TABLE A.—*A Residential Neighbourhood of 10,000 Persons*

Use.	Open development.
Housing	333 acres
Open spaces, buildings, roads, etc.	149 „
Total	482 „
Residential density (persons per acre) ¹	30
Neighbourhood density (persons per acre)	21

REDEVELOPMENT IN CENTRAL AREAS

Table B gives the recommendations of the Dudley Report for redevelopment in central areas, also the maximum density which is proposed for this purpose by Liverpool¹ and the density proposed by Manchester for the only central area which has as yet been fully worked out.

TABLE B

Use.	I. Dudley Report Central (desirable).	II. Dudley Report Central (maximum).	III. Liverpool (maximum).	IV. Manchester.
	Acres.	Acres.	Acres.	Acres.
Housing	100	83	50	200
Open spaces, buildings, roads, etc.	100	85	59	80
Totals	200	168	109	280
Residential density (persons per acre)	100	120	200	50
Neighbourhood density (persons per acre)	50	60	92	36

The Dudley Report suggests that in order to provide conditions of light, air and access, which in its opinion should be regarded as a minimum, the residential density should not exceed 100 persons per acre, as shown in Table B, column I. Column II shows a density of 120 persons per acre, which the Report suggests should be necessary “in very few cases, and then only in large concentrated areas”.

¹ See Appendix VI (p. 253).

This must be regarded as an authoritative pronouncement of what is desirable; unfortunately, however, local authorities are not finding it possible to follow this lead. London has, of course, the most difficult problem of any city owing to the excessively high land values: Professor Abercrombie and Mr. Forshaw have felt themselves forced to recommend a maximum residential density of 200. Under these conditions all the families will have to live in flats, two-thirds of which will be from seven to ten storeys high. They propose this only for limited areas where the land is very high in price; generally they suggest a density of 136, sometimes as low as 100. They estimate that even with these high densities, the final result of the scheme will be that, as against the present population of four million, there will only be room for a population of three and a half million in the L.C.C. area.

Table B, column III, shows that Liverpool, although its congestion is not comparable with that of London, has felt itself forced to propose in its most crowded area a maximum residential density of 200. Birmingham, for the Duddeston scheme, has a residential density of 138.

By way of contrast, Manchester has adopted startlingly low densities for its redevelopment areas.¹ The City Council has given provisional approval to the proposals of the City Surveyor, the Medical Officer of Health, and the Director of Housing, who have prepared their plans so as to allow adequate light and space to every room in order to ensure health of mind and body for the tenants. Their conclusion is that with dwellings of the Dudley standard, it is not possible to provide more than sixteen cottages or thirty flats per acre, and that when these are combined in suitable proportions (including an adequate number of cottages with gardens) the residential density must not exceed fifty persons per acre.

This will involve reducing the population of Manchester from 750,000 persons to about 600,000. A full report by the City Surveyor, Mr. R. Nicholas, will be published in due course, setting forth in detail the proposals as to what planning and what developments are necessary to give every family in Manchester an opportunity of living under really good conditions.

When one compares the figures for Manchester given in Table B, column IV, with those for Liverpool or with those recommended in the Dudley Report, it is clear that Manchester has shown great courage in basing its proposals on the conditions considered to be necessary for the full health and welfare of the residents. No doubt on financial grounds it may be necessary to compromise; but the report should provide an exceedingly inter-

¹ See Chapter XXVIII, p. 204.

esting guide as to what ought to be done to get the best conditions for every family.

TABLE C.—*Overall Densities*

	1939.	Proposed.	Maximum residential density.
London	54	47	200
Moscow	—	33	—
New York	36	—	—
Birmingham	20	20	138
Leeds	13	13	—
Liverpool	27	25	200
Los Angeles	5	—	—
Manchester	27	21	50
Welwyn Garden City	—	12	—

Table C shows overall densities in certain cities both as they exist and as they will be if present proposals are carried out. As regards great capitals, it will be seen that London density is much higher than that of New York, and that even after the Abercrombie report is carried out, it will still be higher. But the comparison is not a fair one: the densities on Manhattan Island are immense; but New York altogether covers 320 square miles, as against 117 for the county of London, and the densities are of course low in the outer parts. It is interesting that those who were responsible for planning Moscow, where any amount of land was available, have deliberately chosen a density as high as thirty-three. The Russians do not believe in cottage dwellings in large cities.

The average densities of other great British cities vary from thirteen in Leeds, which is fortunate in having acquired a large agricultural belt, up to twenty-seven in Liverpool and Manchester. It is interesting that Liverpool is proposing only a very small reduction, whereas Manchester is reducing its density by no less than one-fifth. The overall density of Welwyn Garden City is to be twelve. The astonishingly low figure of five for Los Angeles is due to the fact that the city, with a population of $1\frac{1}{2}$ million, covers no less than 450 square miles.¹ Nobody would suggest Los Angeles as a model of city planning.

¹ See Chapter XX, p. 155.

OVERSPILL

One of the most difficult problems facing many cities to-day is the question of overspill. This is new; before World War I, as the population increased, a city applied from time to time to Parliament to incorporate additional areas within its boundaries so as to meet the needs of the increasing population. The process was slow, laborious and expensive, and was nearly always opposed by the county council from whose area the land was to be transferred.

In the inter-war period, when cities became responsible for housing their populations, the problem of overspill began to be felt. The L.C.C. built large housing estates in the area of surrounding counties. The L.C.C. built and managed the houses and paid the housing subsidies; the county councils provided the services at considerable expense.

The Association of Municipal Corporations has proposed that the county boroughs should develop into single all-purpose authorities, each controlling the necessary surrounding rural area. In that case, the question of overspill would not arise, since cities would have ample land for all their development needs as well as for agricultural belts. But the county councils strenuously resist this proposal, and the Government has declared that it intends to take no action on this controversial matter at the present time. It seems likely, therefore, that many county boroughs will not be able to house their displaced tenants within their own area, and that overspill into surrounding county areas will occur on a large scale. It will probably have to be dealt with by one of the following methods:

The easiest method from the point of view of the city is to do what the L.C.C. did in the inter-war days: to build housing estates in the county area and to leave the provision of the services to the county council.

Many people favour the building of a satellite garden town in the county area by the county borough. The city would no doubt wish to include this for administration purposes within the city administrative area, and this might perhaps be done in some cases. The satellite town would then be owned and administered by the city, just as in the case of Wythenshawe, even though it might be some miles away from the boundary.

Another method might be worked out in which the city and the county council would share the administration of the satellite town on some agreed basis.

The problem is one of great difficulty and great importance from the point of view of providing good services for the transferred families, and of the division of the financial burden between

the county borough and the county council. No satisfactory solution can be found until the Government adopts a definite policy on such major questions as the powers and areas of local authorities, the terms and conditions for the acquisition of land and for compensation and betterment, the financial aid to be given by the Government, and the relations between the county councils and county boroughs.

FINANCE

A remarkable feature of the planning reports which are being issued by the local authorities is that most of them are prepared by planners on lines of what they would like to see built, without any regard whatever to finance. City councils are allowing the reports to be published, often in the name of a planning officer, without submitting them to the finance committee, and without in fact taking any real responsibility for them. Planners frequently state that good planning must pay, and leave it at that. For instance, the London report says, "Planning pays; it aims to eliminate waste, and secure the most economical use of land, labour and material resources. A properly planned capital would eliminate unnecessary labour and result in a saving of time, energy and money for London and the nation." This is all quite true, but it has no relation to the question as to what burden on the rates or taxes will be imposed by carrying out the London plan. This vital factor is simply ignored in most of the reports.

City planning of the type which is nowadays envisaged always involves increased costs to the city under three headings:

(a) Redevelopment plans always mean a reduction in density in the central areas, where land values are high. This involves the purchase of extra land for gardens, open spaces, roads, etc. Open spaces in the central parts of our large cities hardly exist, and they never will exist until money is made available on a substantial scale for their purchase.

(b) Reducing the density in the central parts of the cities means extension in the suburbs, which means the provision of services—gas, electricity, water, drains and transport—over a large area. All this costs money.

(c) Replanning always means replacing derelict or obsolescent buildings with new ones. In the case of slum clearance every new house will involve a subsidy approaching £30 per annum. New buildings of other kinds may sometimes be profitable; in many cases extra cost is involved. Large sums will be required for the increased number and better quality of schools, health centres, community centres, etc.

It has been pointed out that the Duddeston scheme ¹ involves an expenditure by the city of Birmingham of £1,700 for each of the 4,500 families which are to be rehoused. An annual subsidy in the region of £200,000 will probably be necessary for this scheme alone, in addition to the subsidy of £28 per annum for every slum-clearance house. And the Duddeston redevelopment is on more modest lines than most of the schemes that are now being proposed. Redevelopment on the Manchester lines would mean a very much heavier subsidy.

The only help so far proposed by the Government towards redevelopment is a miserable capital grant not exceeding £50 million towards the cost of redeveloping bombed areas for the whole country. If redevelopment on anything even approaching the scale and standard of the plans that are now being put forward is to be carried through, there will not only be a heavy burden on the rates, but to render the work practicable at all very much larger subsidies from the national exchequer will be necessary. No facts are available to render possible even a guess as to the total subsidies which will be required.

REFORM OF LOCAL GOVERNMENT

The question of overspill brings up acutely the problem of the struggle which has gone on for so long between county boroughs and county councils as to the areas which are to be administered by each. It is clear that we are approaching a crisis in local government and that if replanning, as well as other important new functions, are to be effectively carried out, the whole structure of local government requires reconsideration. All the chief types of local authorities have considered this matter and have proposed schemes of reform; the only common feature is that no type of authority is willing to give up any of its present responsibilities or powers! It will be necessary for the Government to take the responsibility for dealing with this matter.

A good deal of agreement is emerging that the major responsibility for big national schemes such as education, health, planning and the public utility services must be left to the large authorities, the counties and the county boroughs. They can afford staffs headed by officers of first-rate quality; their members cannot be influenced by parochial considerations, as in the case of small authorities. They have on the whole proved themselves highly efficient, and responsible organs of government. There can be no doubt that they are worthy of full confidence and support and of steadily increasing responsibilities.

¹ See Appendix IV (p. 243).

Unfortunately this involves weakening the small authorities, and this in turn means a weakening of the sense of responsibility of the individual citizen. It may be hoped that the neighbourhood unit may develop into a minor local authority with defined responsibility, which may contribute to building up from below an increased sense of democratic responsibility, both as regards planning and other municipal services.

MUNICIPAL RESEARCH BUREAUX

When one considers what reforms are desirable it is at once clear that much research is needed before many of the reforms could be carried through with confidence. We have dealt with the need for alterations in the areas, powers and responsibilities of the different types of local authorities, for the best methods of dealing with overspill, and with the foundation of satellite garden towns, and with the problem of segregation of leadership.

Much thought is required about regional planning authorities. A good deal of preliminary work has been done. Larger regions are covered by advisory committees, smaller regions by joint executive authorities. A useful beginning has been made, but the whole question of regional planning is still in a preliminary stage.

Another matter urgently requiring investigation is local taxation, which is constantly discussed, but which has had nothing like enough serious thought in this country. Rates¹ are very largely a tax on houses, which falls most heavily on the poorest families. They are almost as indefensible as a tax on bread, and they are a very important obstacle to the adequate housing of the poor large family. Surely we should not continue to put up with so retrogressive a tax without at least seriously thinking about it?

The immense development of public interest in research is encouraging, but it tends to be limited to scientific and industrial problems. The organisation, powers, areas and finances of local authorities require much hard thinking, and it is high time that we should have a series of independent municipal research bureaux in this country. In the United States there are literally hundreds of municipal research bureaux, often in very close contact with the governments of states and of cities, doing practical advisory work as well as investigating on a theoretical basis. Many universities are closely concerned with this work. In this country there is not a single municipal research bureau. The foundation of one central municipal research bureau in London is urgently necessary as a start, and it ought to be done on a fairly large scale with a competent staff. It might be desirable to have branches in

¹ See Chapter XV, p. 113.

various parts of the country; it would certainly be necessary to work closely with the economic staffs of the universities in the various regions. The Government ought without delay to found a research bureau of this sort, in co-operation with the local authority organisations. It should probably be independent of the Ministry of Town and Country Planning and of the Ministry of Health; the best plan might be that it should come under the Lord President of the Council, like the Department of Scientific and Industrial Research and the Agricultural and Medical Research Councils.

A ROYAL COMMISSION

But quite apart from long-range research into problems of local government, immediate action in some of the main fields is urgently necessary. The Government's declaration that it does not propose to consider the fundamental reorganisation of local government now will not do. Effective planning depends on big changes which must be made during the next two or three years. Either a Royal Commission or a Departmental Committee to consider areas, powers and finance is indispensable. If it were appointed now and reported in two years, and if it were followed by immediate action by the Government, there would still be time for the reorganised local authorities to make their planning effective.

Now is the critical moment; what happens during the next five years is likely to determine what our cities will be like thirty years hence. We are committed to a great period of rebuilding; if we start wrong, the result must be disaster. The city councils are ready; everything now depends on wise and courageous leadership from the Government at a very early date.

CHAPTER XXX

THE CONDITIONS OF SUCCESS

CHAPTER XVII GIVES a list of the five conditions that are essential for successful planning:

1. Suitable planning authorities, national, regional and local.
2. Control of land in the national interest.
3. Adequate finance.
4. Proper national and local plans.
5. The necessary driving force to see that the job is done.

I have already discussed land, the local authorities, and the main elements of national and local plans. It remains to say something about the Ministry of Town and Country Planning and the inter-related questions of money and drive.

THE MINISTRY OF TOWN AND COUNTRY PLANNING

I have emphasised the vision and energy with which local authorities are tackling the replanning of their cities. What about the Government? It is encouraging that a special Ministry of Town and Country Planning has been appointed. Machinery is important, and everybody hoped that the appointment of a new Ministry meant that the Government was going to tackle the job of replanning Britain with vigour, and indeed the Government has from time to time made admirable declarations as to its intentions. There are three great tasks on which the success of the Ministry will mainly depend.

The first is the control of land to ensure that it shall be used in the national interest. The Bill which the Ministry has introduced is so disappointing that the local authorities are unanimously, and even violently, in revolt against it. It is to be hoped that something better will come along, but it is a bad start in the most important field of planning.

The second essential is finance. Unless adequate subsidies are given to enable local authorities to secure open spaces, especially in the crowded parts of the city, and in other ways to obtain a reduction in density, the rebuilding of the cities on the scale that is hoped for will be quite impossible. Here again, the proposals of the Bill introduced by the Ministry of Town and Country Planning are parsimonious in the extreme.

The third great question is to reconstitute the local planning authorities so as to give them suitable areas and suitable powers. In this matter again nothing whatever has been done, except the strengthening of joint executive planning committees; a trivial matter in comparison with what is required.

The local authorities are tackling their problems with conspicuous energy. The Ministry of Town and Country Planning is encouraging them in words; but what the local authorities want is encouragement in Acts of Parliament, and they are not getting it. Quite apart from the three great failures which are listed above, the Government is still taking a suspicious attitude to local authorities. In general, the Government grudgingly allows local authorities to do whatever cannot be done by private enterprise, and occasionally to do things which private enterprise can do but only when it can be proved that private enterprise refuses to do

Any more certain way of discouraging the initiative and its enthusiasm of local authorities would be hard to imagine.

DRIVE AND MONEY

The difficulties of bold planning in England in the inter-war years were brought home vividly to me by what I saw in Moscow and in Manchester in 1936. In Moscow I found a complete team of administrators and technicians hard at work on the great plan for reconstructing the city. The Mossoviet had a pretty free hand in planning the details and in carrying out the work with the full backing of the Government. I never met men more enthusiastic than the planners, engineers and architects who were actually doing the job. Private ownership of land and buildings did not exist. I entirely failed to discover any classes or groups which had separate interests causing them to oppose the carrying out of the plan for the general welfare of the city and the nation. The success of the whole plan seemed to be limited only by the administrative and technical ability of the Mossoviet and its staff, and there was every evidence that the result would be magnificent.

Just about that time Manchester was planning its civic centre. The City Council in the last generation had shown little vision or courage in attempting to improve the central parts of the city. The Town Planning Committee had now recommended a dignified civic centre, and the City Council had approved it in principle. Land in the central parts of Manchester costs up to £500,000 an acre, so that the financial difficulties were bound to be serious. Soon after the plan was approved in principle, an insurance company bought a small site for a new building for £40,000. This building did not conform at all with the proposals for the civic centre. The Town Planning Committee, since they had not the power to prohibit such building, asked the insurance company whether they would build elsewhere if the city purchased the site from them. The company agreed. But when the Town Planning Committee recommended this to the City Council they rejected the proposal on the ground that Manchester could not afford £40,000!

That has been the fundamental difficulty of planning our cities, at least as regards the central portions. Land has been exceedingly expensive, and powers have been quite inadequate. There has been no public drive behind planning to enable city councils to spend the necessary money.

In spite of all this, it is right to say that on the whole a fairly good start has been made. It is encouraging that public opinion is

waking up about planning; that the local authorities are keen and anxious to go ahead, that Parliament is interested. The one depressing thing is the failure of the Government to implement its many promising phrases in action.

Success depends mainly on two things: money and drive. If the public care enough, and if the taxpayers and ratepayers are ready to play their part, then planning control should be adequate to ensure that the seven million new houses will not be allowed to sprawl casually over the countryside, but will be built so as to form part of planned and pleasant cities and country.

CHAPTER XXXI

CONCLUSION

THE ECONOMIC BACKGROUND

I HAVE TRIED in this book not to paint a Utopia, but to consider as a practical proposal by what methods and how quickly we can get every family into a good house in well-planned surroundings without imposing on it too heavy a financial burden. My analysis of the problems of the building industry, of housing and of town planning leads to the conclusion that this can be done without any doubt in twenty years if the proper steps are taken by all concerned. But it should be made clear that success depends on favourable economic conditions. In the first place, it goes without saying that all this will only be possible if peace is preserved; another world war would put an end to any hope of Rebuilding Britain for a very long time. But even assuming peace, there are three main economic conditions without which full success cannot be expected.

The first condition is prosperity. Only a prosperous nation with a high stable level of employment will be able to afford all the demands on the Exchequer which are being so vigorously, and in many cases so rightly, put forward. For this we need an efficient and expanding industry. We shall have to export at least 50% more goods and services than we ever exported before in order to pay, in our new capacity as a debtor nation, for all the necessary imports. We shall have to produce goods and services on such a scale that the standard of living will continue to rise by at least 1½% each year. This can only be achieved if there is a steady and fairly rapid increase in the efficiency and productivity of industry.

Secondly, the people must be not only able but willing to provide the necessary finance. There are two aspects of this; we have shown that probably £100 million per annum will ultimately have to be provided by the taxpayers and the ratepayers for housing subsidies alone; and the Exchequer will also have to meet all the many new demands for social security, education, health, subsidies for agriculture and so on, and probably a much heavier burden than in the inter-war years for defence.

Further, the people's savings must provide the capital to keep the building industry going; it is estimated that this will need something like half the annual savings, if saving goes on at about the inter-war rate. Here again, there will be much competition for the available capital; in particular, industry as a whole cannot be efficient unless it re-equips itself for large-scale production on modern methods. We shall have to approach more nearly to the American habit of "scrap and rebuild". Great industries like cotton and steel and coal are all busily planning their capital reconstruction; an immense volume of savings will be required for this purpose. In short, the people will have to be prepared to face higher taxation than in the inter-war years, and out of the incomes diminished by paying this taxation will have to save each year and invest in capital goods a larger amount of money than they did previously.

Thirdly, the rate of long-term interest must be low. The rents of houses depend more on the rate of interest than on all the other variable factors, such as cost of labour and cost of materials, taken together. The drastic rebuilding of our cities depends on the rate of interest which the cities will have to pay on borrowed capital.

In short, the possibilities of complete success in the Rebuilding of Britain depend on three conditions in the economic field: firstly, the productivity of industry, secondly, a low rate of interest, and thirdly, the willingness of the public to meet the cost.

PUBLIC ENTERPRISE

Our examination of all the different factors on which the Rebuilding of Britain depends forces one to the conclusion that the whole national programme of planning and building can only be successful if the Government show initiative and take control at almost every point. Are the anti-planners right in saying that this is inconsistent with private enterprise, with efficiency, or with democracy?

What do we mean by private enterprise? Unfortunately, the phrase is commonly used, especially in the building industry, to mean the enterprise of persons working for profit as against per-

sons working voluntarily or on salary for the Government. For instance, the Pole Report advocates that the largest practicable number of houses in the post-war era should be built by private enterprise, meaning by that speculative builders working for personal profit, rather than by local authorities, which do not work for profit: the councillors are actuated by public spirit; the housing directors and their staffs work for a fixed salary.

One sees at once what nonsense it is to suggest that individuals show more initiative when working for profit than when working for the Government when one considers what happens in war-time. During the war, victory is a single aim which overrides every sectional interest. For the sake of victory, everybody is willing to agree that the Government shall decide what each individual shall do and where he shall go, what shall be made, who shall make it, and how everything shall be used. Practically all orders are placed with industry by the Government. The rôle of private enterprise is to make whatever the Government order cheaply and quickly and well; there is plenty of scope for energy and ideas in so doing. The Government make the most elaborate plans for victory; nobody dreams of attacking them for "planning" the Normandy invasion; nobody dreams of suggesting that private enterprise shall make competitive plans as against the Government.

This does not mean that we do not rely on private enterprise; the war could not be won without the enterprise of individuals, either working voluntarily as Members of Parliament, as members of local authorities or of the innumerable voluntary organisations which have contributed so much to the war effort, or working for a salary either in the services or in civil affairs. There is plenty of scope for enterprise by private firms and by the individuals working for firms in making what the Government order. But where is the real enterprise on the grand scale to be found during the war? Undoubtedly among public servants; nobody can deny it. Consider what the country owes to the enterprise shown by the Prime Minister, Field-Marshal Montgomery or Lord Keynes. They are only outstanding examples of the kind of energy, initiative, ability, ideas and devoted hard work of public servants which is winning the war for us. Private enterprise in the sense of enterprise for personal profit simply does not count in comparison.

CAN DEMOCRACY PLAN IN PEACE-TIME?

Britain has shown what a democracy can do in war-time. We have doubled our output; we have abolished unemployment; we have organised ourselves magnificently for war purposes, and

are doing at least our full share towards the victory of the Allied forces. We are showing that a democracy can be efficient and yet remain democratic, for in the many actions it has taken to limit freedom in various directions the Government have the fullest support of public opinion, as is shown by the Gallup polls; and Parliament, the essential machinery of democracy, is functioning freely. The members, though not recently elected, are in close touch with their constituents. They could turn out the Government to-morrow if they wished, and they would certainly do so if public opinion demanded it.

The Prime Minister has immense powers: indeed, his powers are probably as great as those of a dictator, but with the one condition that public opinion continues to support him. He himself has said:

"Let me record the fact that this House, a democratic institution based upon universal suffrage, which has preserved its function and authority intact and undiminished during the war, and has shown it can change and sustain government with equal consistency of purpose, has proved itself the foundation and instrument for the waging of successful war and for the safety of the state never surpassed in modern or ancient times."

If we can tackle the problems of peace with anything like the same sense of purpose, the same devotion, and the same efficiency as we have shown during the war, the Rebuilding of Britain will be child's play. But with peace will come the inevitable reaction. That will be the great crisis; the great test of British character. Many people will feel that they have earned the right to enjoy themselves; to return as far as possible to the easy and comfortable life.

There can in a democracy be no single overriding aim in peacetime comparable to the demand for victory in war-time, but the nation might well make up its mind that one of its major aims in the twenty post-war years shall be the abolition of the slums and the building of seven million good and well-planned houses. If we make this a main purpose, and steadily insist on it with anything distantly approaching the strength of our demand for victory, if we show only a fraction of the readiness to pay for a well-planned Britain that we have shown to pay for the war, the object will be achieved. Technically, it is quite easy; to build 400,000 houses a year is a small task compared with the building up of the national aeroplane industry in four or five years to turn out 30,000 planes a year.

And if we decide that we do mean to rebuild Britain in twenty years, then my analysis shows conclusively that we can only

succeed if we tackle this great task on the same broad lines as those which are winning the war: the planning must be done by the Government and local authorities, the decision as to what is to be built and how and when and where must be made by the Government; the actual work of building must be done by individuals or firms working for profit on the competitive system. And we must learn to give up the pernicious habit of suggesting by our wrong use of the phrase "private enterprise" that persons who are working for their own pecuniary profit have more initiative or are wiser or know better what is required in the public interest than those persons who are working either voluntarily or on a fixed salary in the public service.

THE MINISTRIES

Let us now summarise the actions that are necessary in the fields of building, housing and planning, to achieve our programme.

The building industry, along with the numerous industries which provide all the materials and components that are needed in building, must be efficient, and must provide the necessary houses and other buildings of good quality and at reasonable prices. This will be an immense task, far bigger than the industry has ever tackled before. The work of the building industry must, be the foundation of the whole programme and is the one service of outstanding national importance for which the country must, by common consent, whatever Government may be in power, rely on private enterprise.

But the nature of the building industry is such that it has been in certain ways badly organised. The Ministry of Works has now been made responsible for the general supervision of the industry and has acquired invaluable experience during the war. The Ministry will have to play an important part in seeing that research, the development of new methods of construction, standardisation, pre-fabrication and mass production, are all vigorously carried through. A remarkable and potentially very important beginning towards pre-fabrication and mass production is being made at the time of writing by the development of the Portal prefabricated house.

On the administrative side, the Ministry of Works, in conjunction with the Ministry of Labour and other Ministries, must take responsibility for seeing that the building industry itself is of the right size and properly balanced for the tasks which lie before it; and having secured this, the Ministry of Works must be responsible for seeing that the right number of orders are placed either

by private enterprise or on behalf of the public to secure for the operatives in the industry a high and stable level of employment. The Ministry of Works must also ensure that materials and other necessary supplies shall always be available in adequate quantity and at the lowest possible price. This will involve on the one hand steps to secure mass production, and on the other measures to prevent any action by trade associations tending to restrict the cheapest possible production by any of the industries.

Housing

The Ministry of Health is the national housing authority and is responsible on behalf of the Government for all dealings with local authorities. The Ministry must co-ordinate the work of local authorities and of the speculative builder and see that each of them builds the right number of houses of the right quality and price in the right place, at the right time. It must also settle minimum standards of design and equipment for the houses, and the very difficult question of the control of rents, and from time to time in conjunction with the Treasury settle what subsidies are necessary, on what terms they shall be granted, and to whom. Finally, it must arrange that the housing estates shall be well managed and that the houses shall be let to the right families.

Planning

The problems presented by planning are more intricate and difficult than those of building and housing, because they entail so many decisions affecting the interests of so many sections of the population, and because so many separate government departments are necessarily involved.

The Board of Trade is responsible for the location of industry, which includes great intangible movements like the drift from north to south and the decentralisation of population and industry from the great conurbations, as well as more concrete problems like the abolition of the depressed areas and the founding of new garden cities.

The Ministry of Transport is responsible for railways, roads, and the transport system as a whole, including the vexed and urgent question of the number of motor-cars for which planners ought now to prepare.

The Ministry of Health is closely concerned with density standards for rebuilding, and with other aspects of planning. The Ministry of Health has had, and no doubt will have, a high degree of responsibility for the finance of local authorities, which is likely to include aspects of housing and of planning.

The Ministry of Town and Country Planning is responsible

(sometimes in co-operation with other Ministries) for the control of the use of land, including problems of purchase on the one hand, and of compensation and betterment on the other; it is responsible for setting up a complete system of local and regional planning authorities, for defining their powers and the areas over which they work and for giving them help and supervision in the making and carrying out of their plans. It is also responsible, I assume, for trying to persuade the Treasury to allow such grants of capital and income to planning authorities as may be essential for successful planning.

The Treasury

The Treasury is closely involved everywhere and is, of course, supremely important. Everything depends on the success of the Treasury in managing the national finances so that the rate of interest may become much lower, that the necessary capital for the purchase of land and for the erection of houses and other buildings shall be available, and that annual grants can be made on an adequate scale for all the different needs of rebuilding Britain, without causing a revolt of the taxpayers or ratepayers.

The Ministry of Reconstruction

The responsibilities for Rebuilding Britain are accordingly divided among the following seven Ministries:

Ministry of Health.
Ministry of Labour.
Ministry of Town and Country Planning.
Board of Trade.
Ministry of Transport.
Treasury.
Ministry of Works.

All these seven Ministries have essential parts to play. In order to secure co-ordination a Minister of Reconstruction has been appointed. He is a member of the War Cabinet; his function is presumably to ensure that the seven Ministries shall work towards a common policy, to find out where bottle-necks exist and to remove them, to decide what legislation is most urgent, and finally to get the Government as a whole to frame and to carry out vigorously and systematically a positive policy of Rebuilding Britain, co-ordinating into a single whole the work of all these separate Ministries.

This will be a difficult and complex task. The invasion of Normandy was a magnificent piece of planning. It is natural to ask whether we cannot plan the Rebuilding of Britain equally

successfully? Unfortunately, this is a false analogy, for two reasons: firstly, the army had all the finance it needed for its plans; secondly, the men in the Forces did without question what they were told by the High Command. Given these two conditions, which may perhaps prevail in Russia, the Government could no doubt organise the Rebuilding of Britain as efficiently as the invasion of Normandy. But in a democracy in peace-time the people demand freedom of choice—to live, not where the Government plans, but where each individual family chooses; to criticise and to oppose with all their power anything in the government plan which may be contrary to their own interests or to their desires. The whole plan must, therefore, constantly be subject to public opinion, which may change from time to time. The success of the Government in pursuing a consistent policy, in accepting what is good among criticisms and overruling what is bad, in working steadily towards the completion of their programme, will be a test of the planning powers of British democracy in times of peace.

PUBLIC OPINION

In conclusion, the successful Rebuilding of Britain depends mainly on three things: national prosperity, a low rate of interest, and the driving force of public opinion. And the greatest of these is public opinion, since everything else depends on it.

I have explained how a vigorous demand for good houses and for the abolition of the slums arose in 1919 and continued all through the inter-war period. The appeal for houses was brought home to the conscience of every individual by constant stories of the horrors of the slums, in speeches of politicians and housing reformers, in the Press and on the air. England is an outstandingly sympathetic and kindly nation, and the people as a whole made up their minds that the slums must go, and were prepared to make the necessary financial sacrifice to ensure it. By 1939 the country was spending over twenty million pounds each year on housing.

I doubt whether we were spending twenty million pence on planning. Planning has no such emotionally powerful driving force behind it. It needs imagination to see what a city ought to be and might be if properly planned. There is every reason to hope that the taxpayer and ratepayer will be ready to spend a hundred million pounds a year to complete the abolition of the slums, but it is likely to require a great educational¹ campaign to arouse the

¹ Public opinion depends on education and, unfortunately, our schools have done little to make the child take a real interest either in its general duties as

232

same readiness to make sacrifices in order to secure the open spaces, roads and buildings which are necessary for a properly planned Britain.

The most encouraging thing is the enthusiasm of the local authorities, and the determination of many city councils to rebuild their cities on fine and imaginative lines. The vigorous steps taken by the Government to ensure a strong building industry and to get to work quickly on housing after the war are also encouraging. The most depressing thing is the failure of the Government to take the major decisions of policy which are necessary to enable local authorities to go ahead with their planning.

But, on the whole, the prospects not only for building and housing but also for planning, are much better than could have been foreseen ten years ago. We have a magnificent opportunity. Let us make the Rebuilding of Britain one of our chief and most urgent tasks for the post-war years. Let us be inspired with enthusiasm for a great national plan of reconstruction. Let us determine to plan and build healthy and pleasant cities, the finest the world has known, and a monument to the ideals and to the efficiency of British democracy.

a citizen or in the surroundings of its own home and school. See the publications of the Association for Education in Citizenship, 51 Tothill Street, London, S.W. 1, and particularly the report on School Surveys, which are an admirable method of stimulating the child's interest in its own neighbourhood.

APPENDIX I

DEFINITIONS OF RENT AND OF HOUSING STANDARDS

RENT

(1) *Rent*, where used without qualification in this book, means the net rent, that is to say, the economic rent without rates. This is the sum which is necessary to cover all the essential outgoings: interest, sinking fund, management, insurance, etc.

(2) *Gross rent* is the net rent plus rates.

(3) *Net subsidised rent* is the net rent after deduction of subsidy.

(4) *Gross subsidised rent* is the gross rent after deduction of subsidy.

The following example should make the meaning of the definitions clear beyond any risk of misunderstanding.

Assuming a house costing £400, interest at 3%, and sinking fund at $\frac{1}{2}$ %, the figures of the standard inter-war house rented under the Greenwood Slum Clearance Act worked out as follows:

	£		£
Interest and sinking fund	14	Interest and sinking fund	14
Maintenance, etc.	6	Maintenance, etc.	6
(1) <i>Rent (or net rent)</i>	20	(1) <i>Rent (or net rent)</i>	20
Add rates	10	Deduct subsidy	15
(2) <i>Gross rent</i>	30	(3) <i>Net subsidised rent</i>	5
Deduct subsidy	15		
(4) <i>Gross subsidised rent</i>	15		

HOUSING STANDARDS

The inter-war standard house means a three-bedroomed non-parlour house, on the lines recommended in the Tudor Walters Report of 1918, as built by most local authorities and as approved by the Ministry of Health. The floor area is taken as 750 sq. ft. The house was normally fitted with a solid-fuel cooking range, and gas and electricity were laid on by the landlord, but no gas or electric cooker was included in the price. The cost in the thirties was about £400, including £70 for developed land.

The post-war standard house or the Dudley House means the type recommended in the Dudley Report, with a floor area of 900 sq. ft. If costs are 30% above 1939, and if efficiency of building is the same, the cost will be £700, inclusive of £90 for developed land.

The sub-standard house means any house which is below the inter-war standard. There are the following two categories of sub-standard houses:

The slum house, which means any house condemned or likely to be condemned officially as unfit for human habitation.

The obsolescent house, which means a house below inter-war standard but above the slum standard.

The working-class house means a Class C house: that is, a house with a rateable value up to £13 in the provinces and up to £20 in the Administrative County of London. The gross rent of the largest Class C house with a rateable value of £13 varied between about 10s. and 11s. in provincial cities in 1931. (See Table V, p. 256.)

APPENDIX II

CONTROL OF QUALITY OF HOUSES

THE MAJOR WEAKNESS of speculative building is the existence of the jerry-builder, who did so much harm to the reputation of all speculative building during the inter-war years. A question of great importance is whether the jerry-builder can be prevented from doing bad work; that is to say, whether it is possible to control quality in such a way that all speculative builders will erect houses of reasonably good quality, as was done by the majority of them in the inter-war period.

In considering this matter, it is important to bear in mind that speculative builders may be divided into two classes. The first includes the great bulk of the builders, who combine public spirit and the craftsman's desire to do a good job in varying proportions with the desire to make a maximum profit. The second class is the jerry-builder, who has little or no sense of public spirit or of craftsmanship, and who is out for the maximum profit he can make by any means that are legal. He is often skilful at using shoddy materials and at driving labour so that the worker has not time to do a sound job; putting on a good enough finish to hide the defects and to persuade the buyer that he is getting a good

house; finally, selling at a lower price than a good-quality house can be sold at, and yet with a good profit.

It is the competition of the jerry-builder which is feared by the good speculative builder and which tends to force down the quality of all speculative building. If the good builders could be guaranteed against unfair competition, then they would willingly conform to a voluntary scheme for maintaining quality. But so long as the jerry-builder is allowed to go on building superficially attractive houses, which are in reality of bad quality and can therefore be sold cheaper, the whole quality of the work of the majority of speculative builders will be seriously affected.

Some of the leaders of the building societies have given much thought to this matter, and during 1943 a Joint Conference was appointed by the Royal Institute of British Architects, the National House-Builders' Registration Council¹ and the Building Societies' Association. This conference met several times during the year and ultimately adopted a Charter with the following clauses:

(A) That the site planning be subject to the approval of the Ministry of Town and Country Planning.

(B) That the design and planning of the houses be approved by the local authority: such approval to be the responsibility of the authority's own qualified technical staff where employed, and, in other cases, to be dealt with by a statutory panel as envisaged in the Scott Committee Report.

(C) That the local bye-laws, enforced by adequate supervision, be complied with.

(D) That the quality of the workmanship and of the materials be certified by the National House-Builders' Registration Council, as expressly constituted for its wider functions and provided it is given statutory authority.

It would be difficult to devise any better method of ensuring good quality than the effective and universal enforcement of these four conditions.

As regards A, B and C, a certificate that these conditions have been fulfilled could undoubtedly best be given by the local authority. The certification of quality (condition D) is, according to the Charter, to be carried out by the National House-Builders' Registration Council. This is the most difficult of the conditions

¹ The National House-Builders' Registration Council was founded in 1937. By the time the war broke out 1,200 firms were registered; 11,000 houses had been inspected, involving about 60,000 individual inspections.

The President of the Council is Lord Dudley; the first Chairman was Sir Raymond Unwin.

to enforce. To ensure that the quality is right, control must be exercised during building; it is impossible to detect shoddy work, artfully concealed, once the building is finished.

The scheme of the National House-Builders' Registration Council is that the builders on their register undertake to comply with a model specification; the Council inspects the house about five times during the course of erection for a fee of about $\frac{1}{2}\%$ on the value of the house, and the builder guarantees to make good any defects ascribable to non-compliance with the specification that become apparent within two years of the completion of the house.

Under the Building Societies (1939) Act more favourable financial facilities may be given to the builder for a house in respect of which a certificate of sound construction has been issued by a body approved by the Minister of Health. The National House-Builders' Registration Council does not at the time of writing fulfil all the requirements of the Act, but hopes that it will be able to make arrangements to do so after the war.

The War-Time Executive of the Council has submitted to the appropriate Government department its view that control of housing standards by means of the scheme operated by the Council offers the best solution of the problem. In support of this submission it is pointed out that (1) the Council has some considerable experience of the work involved and (2) is representative of all the interests concerned, thereby ensuring a necessary measure of elasticity and speed in administration, and (3) is prepared, able and willing to back by guarantee its inspections.

The building societies are anxious to stop jerry-building. Are they in a position to ensure this by refusing loans to speculative builders who do not carry out the conditions of the Charter? Unfortunately, this is not likely to be the case. The majority of the building societies would no doubt be willing on a voluntary basis to grant loans only on receipt of the proper certificates. The Building Societies' Association has given a lead; most of the societies which are members of the Association would undoubtedly be willing to follow this lead.

But, although the building societies are non-profit-making bodies, they are very keenly anxious to increase their business. The directors get fees, and it is an almost universal characteristic of business men, and indeed of human beings in general, that when they are put in control of an organisation they do everything in their power to make that organisation larger. This may be a purely idealistic motive because they think the organisation renders valuable service, or it may be a purely selfish motive because the individuals wish to increase their own power and

importance, or their own remuneration. In any case, there can be little doubt that the directors of building societies are just as keen to increase the business of their societies as are the directors of profit-making companies. Some of the societies, especially some of the larger ones, have boards consisting of men of the highest quality and of the highest sense of public service; Lord Sankey is Chairman of the Building Societies' Association. On the other hand, it is fair to say that some of the boards are out for business and are little influenced by ideals.

The Association, as at present constituted, has no power to bind its members in such a matter. If the majority of the societies, with their keen sense of public service, should proceed to put the Charter into force, they would, under present conditions, see their less public-spirited competitors willing to make advances on houses not properly certified, thus tending to render ineffective a purely voluntary scheme.

Even if building societies were willing unanimously to refuse loans except to builders who complied with the Charter, there are many other bodies which might lend the money and which could not be bound by the terms of the Charter. It is, therefore, abundantly clear that the building societies are not in a position to enforce standards compulsorily on all builders by the threat of withholding loans. If standards are to be universally enforced, it can only be done by legislation.

THE CERTIFYING AUTHORITY

Another question that arises is whether the National House-Builders' Registration Council is the proper certifying authority or whether this very important task should be entrusted to the local authorities. Many local authorities have been anxious for some years to obtain the necessary powers to control the quality of all housing in their area, and have been willing to increase their staff to perform this public function. Personally, I take the view very strongly that our local authorities will only render their greatest service if they are trusted and given wide responsibilities by the Government. Their success in the quite new task of building and managing over a million houses in the inter-war period gives strong evidence of their capacity to deal with problems of this sort. The local authorities are naturally interested in the quality of every house in their area; their sole interest is to see that the houses are built in the best way from the point of view of the public. This task of taking full responsibility for the quality of all houses built in their area is just the kind of thing which, subject to proper direction by the central Government, local authorities should, and I believe would, perform effectively.

It is often objected that some of the small authorities have not the necessary high-class staff, and could not be trusted to control quality effectively. This is no doubt true ; it is therefore important that this responsibility should be imposed not on all local authorities, but only on the county boroughs and county councils to cover between them the whole of the country.

CONCLUSION

In conclusion, the four conditions of the Charter are excellent ; the voluntary adoption of the Charter by a large number of builders is a useful and important step. But it will leave the worst jerry-builders just as uncontrolled as regards the quality of their houses as they were in the inter-war period. If it is seriously intended that no jerry-built houses shall be erected, then it is quite clear that the Charter must be made compulsory.

APPENDIX III

EXTRACT FROM A MEMORANDUM PREPARED BY W. REES JEFFREYS AND SUBMITTED TO THE ROYAL AUTOMOBILE CLUB

TAXATION AND FINANCE

1. Both the taxation of motor transport and the finance of roads call for review. It is not possible to discover any sound principles of finance to justify the present system of motor taxation. The determining factors in its development have been political. They can thus be formulated :

(1) If motor vehicle users require more and better roads they should be specially taxed to provide them.

(2) No new and improved system of road transport shall be permitted to compete unduly with previously existing forms of transport, but shall be weighted by taxation so that established forms of transport may continue notwithstanding the added cost to industry.

(3) Motor taxes are cheaply and easily collected and their yield is progressive. As their imposition arouses no effective political opposition, it is politically more expedient to impose them than taxes more equitable, but which might alienate political interests.

The unsoundness of these determining factors has become

increasingly apparent, but the heavy taxation imposed under their influence still prevails.

2. As against these political considerations the following principles are proposed :

Basic Principles

(1) There shall be no taxation of transport for general revenue purposes. Motors on roads just as trains on rails are essential instruments of production, and the principle of British taxation quoted by the present Prime Minister when Chancellor of the Exchequer at Newcastle on April 28th, 1928, should be respected: "Nothing must be allowed to interfere with the application of our principle of not taxing the tools and plants of production, but only the profits arising from their use."

(2) Cheap as well as efficient transport will be essential to trade and industry as a first priority after the war, especially in the production of goods for export. Inasmuch as transport costs enter largely into production, no more general aid can be given to manufacturing industries than securing for them cheap and flexible road transport.

(3) That a safe and adequate road system on which transport can operate at a minimum cost is of such first importance not only to industry, but to the wise distribution of population and to the health and happiness of the community that its provision should be deemed a prime responsibility of Parliament and a major charge upon National funds.

3. The application of these principles will mean :

(a) Progressive and rapid reduction of the present heavy taxation on motor vehicles and motor fuel.

(b) The adoption of a revised system of taxation to secure that road costs shall be provided by (1) the ratepayers, and (2) road users not only in definite proportions, but in an equitable manner as between one land and property-owner and another, and between one category of road user and another.

(c) Reduction to a minimum of licensing and restrictive regulations limiting the use of road vehicles.

4. A just and nationally acceptable system of taxation for the provision and maintenance of roads can only be arrived at after careful enquiry by a competent tribunal with due regard to the economic effects of the war and the necessary reorganisation of trade and industry when the war ceases. It is recommended that such Tribunal be appointed composed in the main of men of

wide administrative experience possessing expert knowledge of the economics of land and of transport.

ADMINISTRATIVE ORGANISATION AND CONTROL

1. The unsatisfactory nature of the machinery by which the State has sought to control and secure the co-ordinated development of transport was manifest before the war. War experience and requirements have brought to light even more weaknesses in the State organisation of transport.

2. It is recommended that the Ministry of War Transport be reorganised in order to secure that transport be developed as a whole, but so that no form of transport shall be favoured at the expense of another or to the impoverishment of the community. To secure this result it is proposed that:

“A Supreme Transport Council of the State be constituted, consisting of the Chairman of the several divisions into which transport can be most conveniently divided for administrative purposes and presided over by the Minister of Transport.”

3. The Minister of Transport shall, *inter alia*:

- (a) secure co-ordination between the activities of the transport divisions;
- (b) determine any differences that may rise between them;
- (c) answer for the work of all divisions in Parliament;
- (d) represent them in the Cabinet; and
- (e) ensure that the policies laid down by H.M. Government and by Parliament are carried out.

4. Beyond emphasising the need for co-ordination and suggesting how it may be secured, it is outside the scope of those responsible for this Memorandum to make precise recommendations as to the Governmental organisation of transport other than road transport. The initiative should rest with the interests immediately affected. For roads and road transport it is submitted that:

A Road Board shall be set up which shall exercise all the functions at present exercised by the Minister of Transport in respect of roads and the traffic using them, and that this Board shall be presided over by a Chairman whose signature shall validate the executive acts of the paid Board.

5. Assuming for the purpose of envisaging a co-ordinated transport organisation as a whole that a convenient division of the branches of transport, outside roads and road transport, would be:

- (1) Railways;
- (2) Civil Air Transport and Air-Fields;
- (3) Ocean-going shipping;
- (4) Rivers, canals and coastwise shipping;
- (5) Ports, harbours and docks;

and that the powers now vested in the Minister of War Transport in respect of these various divisions are transferred to five Boards each presided over by a Chairman, then the supreme Transport Council would consist of these five Chairmen, who, with the Chairman of the Road Board (the sixth), would meet under the Presidency of the Minister of Transport to iron out their differences and arrive at a national transport policy.

6. This organisation would meet one of the most serious criticisms directed against the Ministry of Transport, namely, lack of policy. In the course of its twenty-four years of existence it has had fifteen different Ministers, usually junior Ministers, passing political figures seeking political preferment and not reputations as transport experts. In the organisation now proposed a thought-out and balanced policy will be secured by the permanent Chairmen of the divisions, and the Minister will be responsible for harmonising that policy with the political conditions of the moment. The position and responsibility of the Chairman of each division should be made such as to attract the best brains in the transport world, and they will have behind them what no political Minister can secure—long years of transport experience.

7. It will also meet a second criticism, namely, that it is impossible under the existing system for the Minister of Transport to be a successful highway authority. The Minister is normally the executive officer for roads and the political or supervisory officer for the railways. The two positions are incompatible. His activities as executive officer for roads are cramped and biased by his responsibilities as political officer for railways. As road executive he would have built roads and motor-ways; as political officer he has, however, to listen to the railways who oppose that construction. He can never act undivided as a highway authority. On the other hand, the railways are a free and independent organisation to go ahead and build whatever railways and extensions of railways for which they can obtain Parliamentary sanction without regard to the views of road transport, and at the same time secure a large measure of control over passenger and commercial road transport, docks, harbours, aviation and shipping.

EXTRACT FROM REPORT TO THE PUBLIC WORKS COMMITTEE ON DUDDESTON AND NECHELLS REDEVELOPMENT AREA

By H. J. MANZONI, C.B.E., M.Inst.C.E., *City Engineer and Surveyor
of Birmingham, May 27th, 1943*

IT IS CONSIDERED that families with young children under 10 years of age, and old people over 65 years of age, should occupy dwellings on ground or first floor level only. A careful analysis of family constitution has been prepared, and it is estimated that of the total of 4,507 this requirement can be met by the provision of 1,931 such dwellings, with accommodation for 8,282 persons, or 56% of the total population.

The following schedule gives details of the suggested housing development:

Small individual houses in terraces	177
Larger houses	74
Maisonnettes in special 3-storey buildings	1,065
Dwellings over shops, 3- and 7-storey	562
Flats, 3-, 4-, 5- and 8-storey	2,044
Nine Towers (Hostels)	585
	4,507
Density	
	41.70
Dwellings with private gardens	1,316
Dwellings without private gardens	3,191

The suggested distribution and accommodation of the 4,507 units in the previous schedule is set out on page 244. From this schedule it will be seen that families with young children, one-person households over 65, and old couples over 65 will be accommodated either in houses, maisonnettes or ground- and first-floor flats. For the remainder of the population—i.e., single persons, married couples under 65 years of age without children or with grown families—accommodation is provided in flats.

The flats are in the main of four and eight storeys; they are laid out on a north-south axis and planned in most cases around the open spaces, where they will enjoy extensive views and the maximum amount of light and air. The planning of blocks of flat dwellings in opposition to each other has been avoided.

Along the main traffic boulevard nine fifteen-storey towers are shown, which will be reserved as hostels for single people. In

Family unit.	Number of family units.	Number of persons.	Number of persons per family.	Suggested accommodation.
A. Families with young children (under 10 years of age).	1,634	7,948	4.86	Houses. Maisonnnettes. Ground and first floors of flat buildings. First floors over shops.
B. Families without young children.	1,991	6,051	3.03	Upper floors of flat buildings. Dwellings over shops.
C. One-person households, aged 21 to 65.	585	585	1.00	Hostels.
D. One-person households, ages over 65.	260	260	1.00	Houses. A portion of the ground floor of flat buildings designed to suit the special requirements.
E. Old couples over 65.	37	74	2.00	Houses. A portion of the ground floor of flat buildings designed to suit the special requirements.
	4,507	14,918	3.31 (average)	

addition to providing increased accommodation, the buildings will form attractive and impressive architectural features along the boulevard. These hostels are intended to be designed as service flats of one or two rooms only, and incorporating communal restaurants, lounges, and games rooms. They should do much to eliminate the problem of lodging and consequent overcrowding.

It will be seen that the development suggested gives an average building density of 41.7 dwellings per acre, and will necessitate the removal only of 2,293 families from the area.

The layout of the district on these lines enables a maximum of amenity to be provided, particularly open space and garden layout, and the result should rival the best examples to be found in Continental cities, with the additional advantage of a large proportion of cottages and maisonnettes, and with a scientific basis of family analysis. If the gardens and spacious surroundings of the buildings are properly laid out and maintained, the district should be not only pleasant and convenient but artistically beautiful.

The scheme, however, can only be carried out as a whole, and it involves complete acquisition of all the existing site and buildings, except the industrial premises in the factory areas.

It is most important also that all the special buildings should be erected as part of the general development, and not left to some indefinite time in the future.

Estimate of Cost based on 1939 prices

Acquisition of Land, etc.

Acquisition of land and properties; re-siting of factories, including acquisition of open yards and sites of one-storey buildings; compensation in respect of on-licensed premises; re-erection of churches and chapels; compensation in respect of other special buildings	3,318,301
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Roadworks

Roadworks, including clearing sites, subways, flyover bridge, etc.; alterations to mains; reconstruction of bridges to improve approaches to site	1,392,000
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Sewerage	310,000
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Building Development Costs

Dwellings; public and other special buildings	2,724,302
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Total (including administrative charges)	<u>£7,744,603</u>
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ANNUAL ESTIMATED INCOME.

Ground rents from new factory sites, public house sites, cinemas, banks, and rents from dwellings and shops	113,628
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Subsidy ¹ contribution (for 80 years)	<u>41,707</u>
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Total annual estimated income	<u>£155,335.</u>
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APPENDIX V

FIRST INTERIM REPORT OF POST-WAR RE-CONSTRUCTION COMMITTEE OF MANCHESTER CITY COUNCIL, DECEMBER 1943

THE FOLLOWING is a summary of the above report, the more important sections being reproduced in full.

PHYSICAL REPLANNING

In referring first to the physical aspect of reconstruction reference might be made to existing conditions. Generally it might be said that the city has grown in a most haphazard manner;

¹ The subsidy is granted by the Government on condition that there is a rate contribution of 50%.

indeed, except for the housing development since the last war, the growth of the city has in the main been unplanned and control has been limited. Of housing conditions the fact that no less than 68,000 houses are considered by the Medical Officer of Health to be unfit for habitation is a sufficient illustration of the conditions under which many of our people live; it means that no less than one-third of the houses in the city are considered to be unfit and must be demolished.

Of industrial conditions, haphazard, uncontrolled growth is the keynote; industrial buildings are scattered indiscriminately over the face of the city, being almost everywhere intermingled with dwelling-houses and commercial and public or semi-public buildings.

The centre of the city is in many respects typical of the rest of the city; there has been no plan or arrangement in its development; commercial, industrial, and public buildings have been built without any idea of securing a co-ordinated plan.

In regard to communications, here again, apart from the radial roads around which the city has been built, there is no evidence of any plan or system. Manchester has no road system which would satisfy present let alone future requirements of road traffic, and temporary devices (*e.g.*, one-way streets) have been introduced in an attempt to alleviate the evils of the acute congestion of traffic from which the city suffers.

The city is suffering from two major defects in regard to the open spaces available for the recreation of the people; first, the existing open spaces are inadequate according to present-day standards, and, secondly, such open spaces as do exist are not sited so to best suit the needs of those of our people who live in the congested and overcrowded parts of the city.

Manchester is both a home and a place of work; it is most important that it should be replanned as such and, at the same time, it must retain its individuality.

The physical reconstruction of the city, the future "shape" and design of the city, will to a large extent govern the life and surroundings of future generations, and this being so, in the carrying out of this task there are two paramount objects—first, to make the city a more healthy and convenient place in which to live and work and, secondly, to achieve, as far as is possible, by wise planning, the prosperity and well-being of both the city and its inhabitants.

THE SOCIAL NEEDS OF THE COMMUNITY

Next we refer to the sociological aspect, by which we mean the aspect of the citizen; he is, of course, the subject of our post-war

reconstruction policy. Such policy must, therefore, be based upon providing for the fundamental social needs of our people; this means something more than physical planning and development. People, especially those in large cities, live as a community, and we must provide the essential requirements for the enjoyment of full measure of social and cultural life. Indeed, it is of little use our providing new homes and ideal housing conditions amidst planned surroundings unless our people are also provided with the means to secure a full measure of life.

Accordingly, we propose to examine the question of the social needs of our people, and our enquiry will cover the whole range of the social and cultural services necessary to provide a satisfactory basis for the future life of the city.

This task will include a review of the social services at present provided; such a review would indicate the extent to which existing services are deficient and disclose the problems likely to arise in adapting or extending the existing services to meet post-war demands.

Upon the necessity for a review of this kind we may instance the proposal which is being considered by the Town Planning and Buildings Committee that the basis of Manchester's physical reconstruction should be on the lines of neighbourhood units. In relation to this type of development it is necessary in our view to consider not only the planning aspects but also the social needs of the families living in neighbourhood units. Accordingly, an endeavour must be made to measure the needs of the residents of those units in relation to those social requirements without which the life of the people will be incomplete.

Another sociological question which must be considered is that of encouraging and developing a much deeper sense of civic responsibility on the part of the average citizen than has been apparent hitherto. The success of any post-war reconstruction policy depends to a very large extent upon the outlook of the average citizen and, therefore, we must encourage and foster the interest of our citizens in the post-war reconstruction proposals. How this can best be achieved is a matter which your Committee are considering, but that much can be done in this direction is clear from the achievements of war-time civic organisations (*e.g.*, Wardens' Service and "Good Neighbours' " Scheme), and in our view it is essential that the civic spirit which has been responsible for the success of those organisations should be maintained and further developed after the war.

THE ECONOMIC ASPECT OF POST-WAR RECONSTRUCTION

Under this heading the Committee discusses the difficulty of making its plan until the Government has announced its policy on such subjects as full employment, the location of industry, and priorities as regards labour and materials.

LOCAL GOVERNMENT SERVICES

Reconstruction is being actively considered by all the relevant committees and will be dealt with in later reports. Only town planning and housing are dealt with in this report.

TOWN PLANNING

The Town Planning Committee is considering development on the following lines.

Residential Areas

The basis of redevelopment will be neighbourhood and district units. Neighbourhood units will be planned so as to house within each unit a population of between 8,000 and 9,000 persons. This population is thought sufficient to provide within the unit a sufficient breadth of social, recreational, and educational interests to maintain an active, energetic, and healthy community centre, or people's club, and within each neighbourhood unit there will be provided a neighbourhood centre in which shopping facilities, churches, public-houses, branch library, and health centre would be located in close proximity to the community centre, thereby affording full opportunities for social intercourse, interest in local matters, and therefrom the development of wider civic interests.

Certain facilities, such as art galleries, museums, civic halls, main libraries, main health centres, public baths, major shops, cinemas, etc., will need to be collected into larger or district centres from which a number of neighbourhood units will be served with these larger needs.

Each of these larger or district centres would serve from six to nine neighbourhood units, or a population of between 50,000 and 75,000 persons.

Industry.

Provision is to be made in the planning scheme for the lands necessary to ensure a balanced industrial development. For this purpose an industry survey is being prepared from employment statistics supplied by the Ministry of Labour and National Service, and on the basis of these statistics an investigation is being made to ascertain the extent to which industries in the City are expand-

ing or contracting, so that it will be possible to make proper provision for sites for industry.

City Centre

Consideration is being given to the necessity for the proper redevelopment of the City Centre.

TRANSPORT

(a) Highways

Research is being undertaken to ascertain the necessity for new or improved road facilities, including ring roads and by-pass roads.

(b) Other Transport

Transport facilities provided by railways and canals are of major importance in a traffic centre such as Manchester, and planning problems in relation to railways are now being considered by a Committee set up by the Chamber of Commerce.

At the same time it is necessary to point out that the Government have decided that a national planning policy is essential in order to secure the right use of the land in the country for all purposes; this national policy has not yet been laid down but is at present under consideration by the Ministry of Town and Country Planning, and until the principles of that policy are defined by the Government it will not be possible for the planning proposals for the city to be finally determined. Within the framework of the national plan there will be proposals of regional and local significance, and the Minister is retaining the present system whereby the preparation and execution of schemes is undertaken by regional authorities or local authorities.

In this respect it may be pointed out that in preparing replanning proposals for the City the Town Planning and Buildings Committee are associating with the Manchester and District Regional Planning Committee, of which the Council are a constituent authority, so as to ensure that the planning proposals for the City are in harmony with the planning proposals for the area of the Regional Planning Committee.

There are, however, two important questions upon which the Town Planning and Buildings Committee have already reached provisional conclusions; the first relates to the principles which should govern residential development or redevelopment in the City, and the second to the effect which redevelopment will have upon the future population of the City. In regard to the first question, the principles referred to have already been approved

by the Council, and their adoption should ensure that residential development or redevelopment follows sound planning practice. In regard to the second question—namely, that of the future estimated population of the City—it is the view of the Town Planning and Buildings Committee that if the City is to be redeveloped on sound lines, then the population of the City is likely to be reduced by about 150,000 persons; the sole basis of this estimate is the extent to which housing accommodation should be provided in the City if efficient planning is to be secured. This is, obviously, a question which must receive most careful consideration in relation to post-war reconstruction.

PROVISION OF MUNICIPAL HOUSES

It is the function of the Housing Committee to provide housing accommodation to meet the City's housing needs in accordance with the duties placed upon the Council by the Housing Acts. The Housing Committee have submitted to the Council a report upon Manchester's post-war housing needs, which were estimated as follows, viz. :

	Dwellings.
(1) Houses required to replace those unfit for human habitation	68,837
(2) Houses required to abate overcrowding	435
(3) Houses required to meet normal or abnormal variation of population	7,000
Total estimated need	76,272

The Housing Committee, in the light of this estimate, thereupon considered the preparation of a house-building programme designed to meet the City's needs; the Committee considered this question generally and also in relation to immediate post-war needs. Upon the general question, the Committee reached the conclusion—which was necessarily provisional—that of the 76,272 houses required it would only be possible to erect some 28,536 dwellings within the present boundaries of the City.

In relation to the remainder of the programme, namely 47,736 dwellings, the Committee pointed out that such dwellings would have to be provided outside the present boundaries of the City, for the reason that there was no building land available in the City for the purpose.

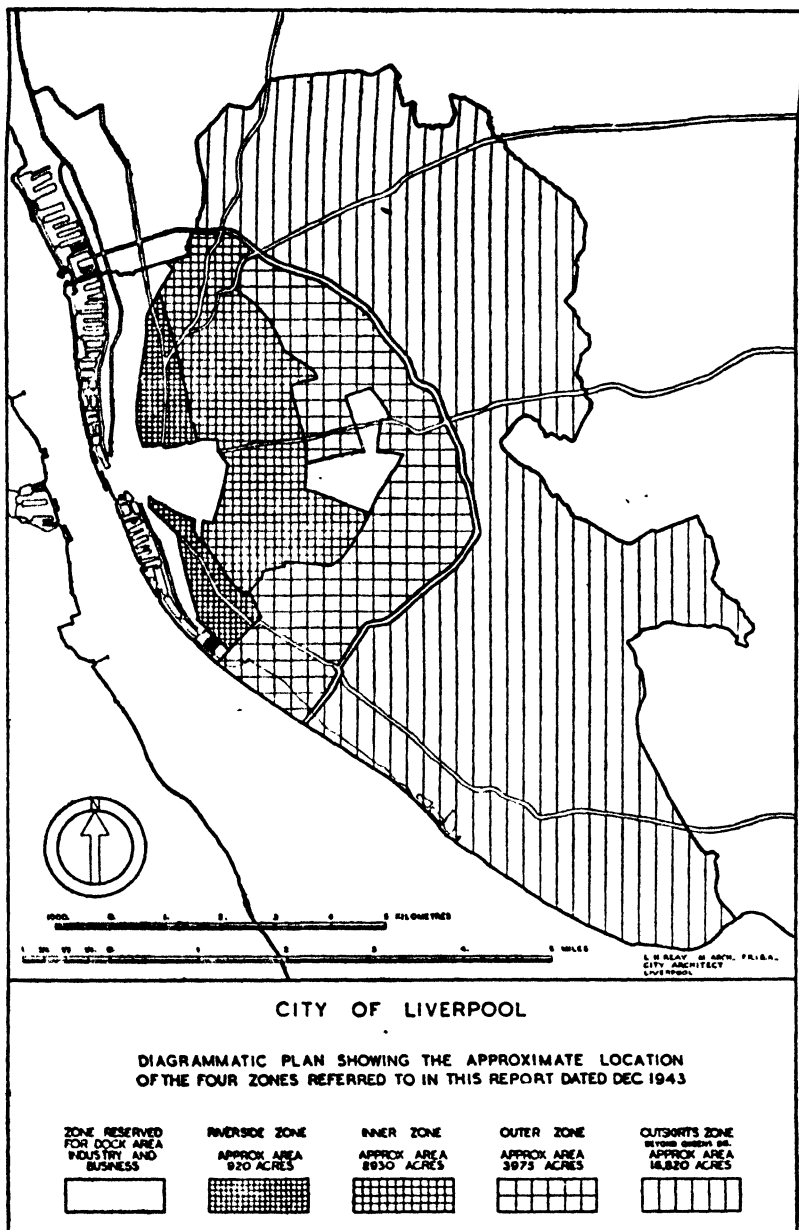
It is anticipated that Manchester's housing needs will have to be met, to the extent of about 50,000 houses, by house-building outside the present boundaries of the City, and mindful as we are of the difficulties and delay which must necessarily take place in preparing proposals for housing development outside the City, we

propose to proceed as soon as possible with the consideration of this matter.

This is the only way in which a comprehensive housing programme can be visualised, and it will enable the Council to have some idea of the difficulties which are involved and the problems which are likely to arise. At the same time, when the programme has been prepared its execution will (as we have already indicated) depend largely, if not entirely, upon the extent and nature of the control which is exercised by the Government after the war in relation to constructional work of all kinds and, in particular, to the priority accorded to house-building.

THE AIMS OF POST-WAR RECONSTRUCTION

In concluding this, our first interim report, your Committee think it desirable to set down what they consider to be the aims of the post-war reconstruction policy for the City. They are: to provide for the City and its inhabitants healthy conditions of living and of working; to so plan the City that suitable provision is made for housing, industry, and commerce; to ensure that the layout and design of buildings will be convenient, efficient, and attractive, and in keeping with the dignity of a great City; to preserve such amenities as already exist and to provide such additional amenities as may be expedient; to provide a comprehensive communication system sufficient to meet present and future traffic requirements; to provide the social and cultural facilities and services requisite to the needs and welfare of the inhabitants; to secure as full a measure of social life as is possible for our people and, in particular, to engender an active and vigorous interest in citizenship; and generally to secure as far as is possible the prosperity and well-being of the City and its inhabitants.



APPENDIX VI

EXTRACT FROM REPORT ON HOUSING AND REHOUSING

By L. H. KEAY, F.R.I.B.A., *City Architect and Director of Housing of Liverpool, December 1943*

Standards of Density and of Land Areas for Community Sub-Unit of 10,000 persons

(Housing requirements are based on an average of 3·8 persons per house or flat in all four zones of development.)

Densities and land areas.	Zones of development.			
	Outskirts zone.	Outer zone.	Inner zone.	Riverside zone.
(A)	(B)	(C)	(D)	(E)
Net density per acre of housing land:				
Dwellings	16	26	36	53
Persons	61	100	136	200
(Based on item 1 below)				
Gross density per acre of developed land:				
Dwellings	9	14	18	24
Persons	34	55	69	92
(Based on item 7 below)				
	Acres.	Acres.	Acres.	Acres.
1. Housing land	164	100	74	50
2. Open space	60	42	36	30
3. Schools	20	20	16	12
4. Communal buildings (shops, churches, community and health centres, etc.)	10	8	6	5
5. Local industries	20	3	3	3
6. Main roads	20	9	9	9
7. Gross area of development	294	182	144	109

TABLE I.—*Employment in the Building Industry 1918–1938*
(Yearly average of number of persons—males aged 16–64, females aged 16–59—insured and employed from 1918 to 1938 in Great Britain and Northern Ireland.)

Year.	Insured.	Employed.	Unemployed.
	000's	000's	000's
1918	590	550	40
1919	675	625	50
1920	750	700	50
1921	740	670	70
1922	725	640	85
1923	670	590	80
1924	693·8	617·3	76·5
1925	722·9	651·5	71·4
1926	763·9	680·1	83·8
1927	801·3	716·8	84·5
1928	816·0	715·4	100·6
1929	825·2	716·1	109·1
1930	834·2	697·9	136·3
1931	854·3	664·1	190·2
1932	860·3	610·0	250·3
1933	884·7	675·3	209·4
1934	926·9	756·6	170·3
1935	974·2	814·2	160·0
1936	1,015·1	866·5	148·6
1937	1,034·6	892·8	141·8
1938	1,047·1	889·7	157·4

These figures are based on a table published by Mr. Ian Bowen in "Oxford Economic Papers, No. 3".

TABLE II.—*Value of Output of the Building Industry in 1935 and 1938*

Year.	New building.		Repairs.	Total.
	Dwellings.	Other building.		
	Millions of pounds.		Millions of pounds.	
1935	177	71	93	341
1938	166	108	99	373

These figures have been taken from an article by Mr. Ian Bowen and Mr. A. W. Ellis, which is shortly appearing in "The Oxford Economic Papers".

TABLE III.—Number of Houses built in Great Britain with and without State Assistance in each Year ended March 31st, 1920–39

Years ended March 31st.	Houses built by Local Authorities with State assistance.	Houses built by private enterprise.		Total.
		With State assistance.	Without State assistance.	
1920 . . .	576	139	} 58,800 approx.	275,930 approx.
1921 . . .	16,786	13,328		
1922 . . .	86,579	21,577		
1923 . . .	67,062	11,083		
1924 . . .	19,586	4,534	69,396	93,516
1925 . . .	23,862	48,830	71,072	143,764
1926 . . .	49,508	66,569	68,254	184,331
1927 . . .	83,714	83,681	65,867	233,262
1928 . . .	120,494	77,725	62,479	260,698
1929 . . .	69,677	52,156	66,015	187,848
1930 . . .	73,268	53,825	93,099	220,192
1931 . . .	60,636	5,626	130,542	196,804
1932 . . .	76,528	5,309	132,629	214,466
1933 . . .	66,731	6,393	149,007	222,131
1934 . . .	70,247	11,229	212,228	293,704
1935 . . .	75,326	1,139	292,470	368,935
1936 . . .	70,486	222	279,607	350,315
1937 . . .	87,423	797	281,683	369,903
1938 . . .	92,047	2,551	265,058	359,656
1939 . . .	121,653	4,207	233,013	358,873
	1,332,189	470,920	2,531,219	4,334,328

3,002,139

TABLE IV.—Average Number and Percentage of Houses built in Great Britain by Local Authorities and Private Enterprise respectively in five-yearly periods between 1920 and 1939

Five-yearly period.	Annual average number of houses built by Local Authorities.	Annual average number of houses built by private enterprise.	Annual average number of total houses built.	Annual average percentage of houses built by Local Authorities.
1920–24 .	38,118	35,771	73,889	52
1925–29 .	69,451	132,529	201,980	34
1930–34 .	69,482	159,977	229,459	30
1935–39 .	89,387	272,149	361,536	25

TABLE V.—Table showing for Certain Current Controlled Rents the Corresponding Figures of Rateable Value on the Assumption that the Assessment is Exactly Based on the Controlled Rent

	Current rateable value.	Rates in the £.		Corresponding current controlled weekly rent inclusive of rates.	
		s.	d.	s.	d.
Upper limit of Class C.	£13 for the Provinces.	7	6	9	9
		10	0	10	5
		12	6	11	0
		15	0	11	8
	£20 inside the Administrative County of London.	7	6	14	3
		10	0	15	2
		12	6	16	1
		15	0	17	0

This table is taken from the Report of the Inter-Departmental Committee on the Rent Restrictions Acts, 1931, p. 62.

TABLE VI.—Costs, Rents and Subsidies

Cost of house, including land.	Inter-war house.		Dudley House. ¹	
	£400.		£700.	
	In shillings per week.	In pounds per annum.	In shillings per week.	In pounds per annum.
	s. d.	£	s. d.	£
Net rent	8 0	20	12 6	32
Rates	4 0	10	6 3	16
Gross rent	12 0	30	18 9	48
Subsidy	6 0	15	10 9	28
Gross subsidised rent .	6 0	15	8 0	20

Interest is taken at 3% in each case.

¹ See Chapter XIV, p. 98.

TABLE VII.—Interest Charge on Post-war Standard House

Cost of house, including land.	£600.	£800.	£1,000.
Rate of interest.	Annual charge for interest, including sinking fund at $\frac{1}{2}$ %, in pounds per annum.		
3	21	28	35
4	27	36	45
5	33	44	55
6	39	52	65

